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THESIS

Trends of Employee Training in Post-War Industry

by

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PREFACE

It may be worthwhile for the reader to consider the various approaches to the problem of employee training in post-war industry. William Snyder,[1] Secretary to the International Typographical Union, said the very scope of the problem, suggested by the title, would challenge the resources of several well-endowed research institutions.

Perhaps, then, because of the nature of the subject, it is possible to obtain only the effect of a revolving beacon light which illuminates brightly the objects close to its source of light and reveals vaguely those things which are more remote. Perhaps, too, a reluctance to make specific recommendations or predictions is the prerogative of the Master student. It is hoped, however, that this treatment of employee training will stimulate an interest in one of the real economic problems of our day.

Educators, and labor and management leaders, interested in employee training congratulated the author on the timeliness of this study, but hastened to assure him that all work would be spade-work in the field. Indeed, they were correct. However, the work as it stands has stimulated the author so that he may explore the field of sales training or workers' education, for example, as a doctorate dissertation.

1. In a letter to the author on May 4, 1945.

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As implied, the sources used are all primary ones. The final presentation is divided into three main parts. Part One gives a historical treatment of the employee training services available through Government resources during World War II. Part Two emphasizes the factors influencing the post-war status of similar services. Because of the impact of these war-time services any anticipation of post-war conditions must pay special attention to their present and probable function in a dynamic economy. Part Three reveals a role that New England Colleges might play in training employees and sets down some check points and trends which ought to be considered by everyone interested in employee training in post-war industry.

At the outset, attention is drawn to the final paragraph in which the author confesses he would like to be able to say (to labor and management leaders and educators) "This is it!", but he can in fact only say this paper reveals some of the more important considerations of trends which will influence employee training in post-war industry.

I. GOVERNMENT TRAINING SERVICES AVAILABLE DURING THE WAR

INTRODUCTION

A study of the training services for industrial employees available through the Government is no exception to the general rule that any study has meaning only when associated with a broader scheme of things. Parts I and II are an examination of a staff relationship of Government with Industry.

To say that the training services are in a similar category with the services of the Departments of Agriculture and Commerce (in that they are advisory and supplementary) is to neglect the assumption by the Government of an emergency program to facilitate an adjustment of the economy. The precedent had been set by the PWA and WPA times of another emergency; i.e., the 1930's. It is not unreasonable to recognize, as the Committee on Education recently stated in an interim report to the Connecticut Post-War Planning Board,[1] that the Federal Government possesses a primary responsibility to facilitate the transfer from a war to peace economy through the provision of the financial means for retaining.

Economic considerations have dictated and will dictate the wisdom of training services by Government. In war, training made victory possible. In peace, training can help readjustments and

1. "Interim Report to the Connecticut Post-War Planning Board," by the Committee on Education, Hartford, Conn., July 1, 1940, p. 90.

lighten the burden of unemployment relief.

It is generally conceded[1] that the "miracle of production" could not have been achieved in time to have turned the tide of battle without the help of the training services offered by the Government; so it is appropriate to consider exactly for whom the training was available, the scope of each service, why it was offered, and through whom it was obtained.

Since the need (demand) for the training services was established before the outbreak of war, we shall consider, in Part II, underlining the need for retraining in the post-war, to what degree the present services will be maintained. In making such a determination it will be necessary to examine the statement of various pressure groups, some legislation already passed, and some legislation not yet approved.

A. SERVICES CONVERTED FOR WAR TRAINING

1. United States Employment Service

Several permanent training services have been geared for a war-time economy. The local employment offices of the U.S. Employment Service are commissioned to recruit and place qualified workers of all kinds. In its effort to bring together men and jobs, U.S.E.S. frequently assists in recruitment of applicants for training; it surveys

1. The unanimous opinion of fifty industrial plant training men, as well as NAM, USCC, MAI, and CIO representatives in correspondence with author.

a plant's individual personnel needs and directs the applicant to the training service which will qualify him for the job opening.

The legal history of U.S.E.S. may be traced through four distinct steps:

a. Established in the Department of Labor by Public Law No. 30 (Wagner-Peyser Act), approved June 6, 1933.

b. Transferred to the Federal Security Agency by Public Law No. 19, approved April 3, 1939, effective as of July 1, 1939, becoming the United States Employment Service Division, Bureau of Employment Security, Social Security Board.

c. Affiliated State Employment Services federalized on January 1, 1941.

d. Transferred to War Manpower Commission by Executive Order No. 9247 of September 17, 1942.

2. Apprentice Training Service

Perhaps the Apprentice Training Service (ATS) has more prestige than any other training service offered by the Government. Through its field staff, ATS offers assistance in the solution of labor relations problems arising from training programs. ATS has been in existence since 1937 and has had wide experience in assisting employees in the solution of problems of seniority, hours, wages, and classification of workers in connection with training programs. The function of U.S.E.S. and the labor relations function of ATS may more

properly be considered as services contributing to the training of war workers than as training services in themselves.

ATS, drawing upon its years of experience in apprenticeship training, provides assistance for employers planning production or preproduction training for specific operations. The ATS never does any training. Specialized training is paid for by the employer entirely and is done during hours of employment. ATS goes one step further in aiding the formulation of training programs that enable employed workers to qualify for upgrading. The purpose of upgrade training is to develop specific skills in individual workers through (a) organized work experience; i.e., ATS works out with joint committees of labor and management organized and formalized plans for training machine operators and process workers, and (b) supplementary training provided by vocational schools. In all ATS training, how workers will be trained for upgrading depends upon the training facilities available in the community.[1]

In assisting a plant, ATS endeavors to give adequate attention to all training needs, i.e., what the plant should do now; what it will need to do in a year or more.[2] This raises the problem of training workers through apprenticeship. Apprenticeship, as conducted in American industry under modern methods, is a system of training in

1. Patterson, W.F., "ATS Looks at Present at at the Future" Manpower Review, April, 1944, p. 4.
2. Patterson, W.F., "Wartime Program of ATS", Personnel, November, 1943, p. 1.

which an employee is given thorough instruction and experience, both on the job and in the classroom, in all the practical and theoretical aspects of the work in a skilled trade.[1]

In the development and establishment of apprenticeship programs, as described above, industry has the assistance of ATS, War Manpower Commission, and State apprenticeship agencies in States in which these agencies are established. These programs are set up in accordance with certain basic standards, mutually agreed upon by employers and labor in the various skilled trades, which are recommended by the Federal Committee on Apprenticeship. This committee, which is equally representative of management and labor, is the national policy-making body on apprentice training.

Applicants for apprenticeship are selected by the employer or by the management-labor apprenticeship committee. Apprentices earn while they learn; they usually are upgraded every six months. Choice of craft or trade may be selected from over 100 approved occupational groupings in over 30,000[2] different industrial plants. Apprenticeship training usually requires about four years - the time for training varies with the trade, previous experience, and ability to become proficient in skills of the trade.

In addition to the training on the job, every apprentice receives related supplementary classroom instruction which is usually

1. War Manpower Commission "Apprentice Training for Veterans", Bureau of Training, Washington, D.C., 1944.
2. Ibid., p. 2

provided by local public vocational schools. Under most apprenticeship programs, apprentices are required to spend at least four hours a week in these classes, or 144 hours per year, during each year of their apprentice training.

The major provisions of an apprenticeship program are embodied in a written apprenticeship agreement signed by the employer and the apprentice. Each individual apprenticeship agreement is officially registered with the Federal Committee on Apprenticeship or a State apprenticeship council in States (26 in 1945)[1] in which such a council is established. Outlined in this agreement is the time required for training, the credits for past experience allowed the apprentice, the work processes in which he is to be trained on the job, the number of hours he is to attend classes in supplementary related instruction and the progressively increasing schedule of wages he is to receive during each period of his training.

Upon completion of the term of apprenticeship, an apprentice becomes an all-round skilled worker. In recognition of his new status, he is awarded a Certificate of Completion of Apprenticeship which is similar to a diploma awarded graduates of a school or college. This certificate is issued by the Federal Committee on Apprenticeship or a State apprenticeship council where such a council is established.

The enabling acts for ATS are traced in one piece of legislation and two quasi pieces of legislation: the ATS was (a) established

1. Ibid., p. 5.

in the Department of Labor by Public Law No. 308, approved August 16, 1937, (b) transferred to Federal Security Agency by Executive Order No. 9139 of April 18, 1942, (c) transferred to War Manpower Commission by Executive Order No. 9247 of September 17, 1942.

Mr. Joseph Gargan, one of ATS's Boston Representatives, stated, when interviewed by the author on October 3, 1945, that no figures are "available" for the number of persons trained in cooperation with ATS. If figures were available, they would be almost meaningless since the age group of apprentices in almost every instance coincided with the age group covered by Selective Service - and most apprentices went to War. However, Mr. Gargan stated that although there were only 35 indentured apprentices in Massachusetts in January 1945, there were 100 in October 1945. Thus, the end of the war has witnessed a trend, already increasing, which will be given further stimulation by the provisions of the "G.I. Bill of Rights".[1]

3. Visual Aids Service

Visual Aids Service (VAS) is another permanent training service. VAS was established in the United States Office of Education, Federal Security Agency, by Public Law 647, which was approved July 2, 1942. VAS provides motion pictures, film strips, and instructors' manuals as aids in training program.

Two weeks before "Pearl Harbor", December 7, 1941, the first visual aids for war training of the U.S. Office of Education were

1. See p. 41f and p. 69f.

placed on the market. So well have these films done their job that War Manpower Commission ex-Chairman McNutt recently termed them America's "secret training weapon" putting "war industry workers on the production line in one-fourth to one-third less time."[1]

Today the Office of Education has over 400 training firms in continuous use in vocational schools, in war plants, and in the Army and Navy. Subjects for the films come from training needs. These needs are closely examined to determine their motion-picture possibilities and to ascertain whether training aids are not already available (either motion pictures or other aids). The subject areas are approved by the Chairman of the WMC and the subjects themselves by a committee of training experts in the Office of Education.

Production of the films is done by educational motion picture companies. Each film is supervised by a technical specialist and a visual specialist of the Office of Education, and by a local committee of technical and training experts in the locality in which the picture is produced. The films actually cost the Government nothing, since they are sold by the Office of Education at a rate calculated to return the full cost of production.

This is the first time that the Office of Education has produced films in integrated series, graduated in difficulty, and intended to form basic curricular material designed to gear into

1. Klinefelter, C.F., "VAS Provides Visual Aids for War Training", Manpower Review, April, 1944, p. 8.

organized courses of instruction. It is also the first time that integrated visual units have been developed with motion picture, filmstrip, and instructor's manual, planned and produced as an instructional unit to meet today's training needs.

Visual training aids are not merely a wartime expediency. The National Industrial Conference Board[1] reports that 62 percent of the companies covered in a recent survey were using them; further, 85 percent of the executives of these firms stated that they intend to continue the use of visual aids after the war.

4. Vocational Training for War Production Workers

Within the permanent U.S. Office of Education is a division of vocational training for war production workers (VTWPW). The VTWPW program was established in the United States Office of Education, Federal Security Agency, by Public Law No. 668, which was approved June 27, 1940.

When the wartime emergency began, the Nation was faced with a serious shortage of trained mechanics. Since it is impossible to train skilled tradesmen in a short time, it became necessary to train vast numbers of workers in single skills. The public vocational schools which had nearly a quarter of a century of trade and industrial education experience were waiting to do this essential training job.

1. Klinefelter, op. cit., p. 9.

VTWPW, in cooperation with State and local boards of vocational education, provided occupational training in courses of less than college grade to workers in war production industries.

Up to 1944, more than 6,000,000 men and women had been given training chiefly for jobs in such industries as aviation, shipbuilding, machine tools, and ordnance.[1] Workers had also been trained for such essential industries as mining, lumbering, hides, motor and railroad transportation, and communications. More than 1,000,000 women, new to the labor market, had received training in the public vocational schools.[2]

Total enrollments included 500,000 supervisors, foreman trainers and instructors as well as 500,000 civilian employees and uniformed personnel of the armed forces - civilian mechanic-learners (radio) for the U.S. Army Signal Corps, civilian mechanics for the Air Service Command, and enlisted personnel for branches of the U.S. Navy.[3] An incidental contribution for the U.S. Navy was the training of thousands of civilian mechanics to repair and maintain facilities damaged in the Japanese attack at Pearl Harbor. Civilian workers and enlisted personnel trained by the public vocational schools for the armed services are serving around the world in 1945.

1. Hawkins, L.S., "VTWPW Program an Integral Part of Manpower Utilization," Manpower Review, April 1944, p. 6.
2. Ibid., p. 6.
3. Ibid., p. 6.

The program of VTWTW was governed by three important considerations: (a) the training program is definite part of the overall manpower program; (b) it operated in the sphere of national manpower policy coordinated by the War Manpower Commission which concerned the preparation of workers for employment in specific war industries or workers who were seeking to advance themselves to jobs requiring greater skills, knowledge, and responsibility; (c) the training program was a cooperative undertaking between the Federal Government and the States, governed by a State plan which set broad standards concerning instructor and supervisor qualifications, representative advisory committees, and types of training.[1] Cost was defrayed by funds certified to the States by the U.S. Office of Education. The WMC approved the list of occupations for which training was given.

The conduct of the training program required the preparation of special instructional materials to meet war conditions and several of the States established instructional materials laboratories. A total of 101 instructional monographs dealing with shipbuilding occupations, aircraft manufacturing, electrical manufacturing, machine shop, sheet metal, inspection practices, have been developed and are being used by training programs of war manufacturers, the Army, the Navy, and other agencies.[2]

1. Ibid., p. 7.
2. Ibid., p. 7.

In 1945, the vocational schools are serving industry by providing consultation services to employers and organizing training programs in the schools or in plants to meet specific training needs, such as the training of specialists, or in the selection and training of instructors, foremen, and supervisors. Much of the training is for the purpose of replacement and for the refining of the skills of plant workers.

VTWPW (in cooperation with State boards for vocational education and through public vocational schools) developed training services which we may classify roughly into six groups.[1]

1. preemployment training: specific and intensive training for definite payroll jobs in war industries, to prepare individuals for entrance into war industry employment as production operators and process workers.
2. preproduction training: training in the performance of specific operations; to provide instruction for beginning or potential workers during hours of employment.
3. supplementary training: instruction in skills, techniques, and special knowledge; to increase effectiveness of employed workers.
4. conversion training: training in specific operations and related knowledge; to train workers in operations requiring new skills.

1. War Manpower Commission, "Training Services", Bureau of Training, Washington, D.C., November 1943, p. 10.

5. refresher training: training in manipulative skills and related knowledges; to refresh dormant skills and knowledges of craftsmen.
6. supervisory training: short-unit courses in various phases of supervision; i.e., training of supervisory personnel as instructors and conference leaders to assist them in carrying out their responsibilities as managers, supervisors, and instructors within their respective departments.

5. Training Teacher-Trainers

Another somewhat similar service was available through State boards for vocational education (not VTWPW) and was called "training teacher-trainers". This service provided a comprehensive program of instruction in the methods, techniques, and materials used in efficient instruction; its purpose is to train full-time instructors to conduct training programs.

The State boards' and the public vocational schools' service is a permanent one; whereas, the VTWPW's was an emergency establishment within the U.S. Office of Education.

Before discussing the training services sponsored by the Government as temporary, war-time expediences, let us examine two other permanent services: namely, those of the U.S. Department of Labor, and the U.S. Maritime Service. The Veteran's Administration, while performing an important service, certifies training programs for such a relatively small number of employees that a discussion of

its services will be postponed to Part II.[1]

6. Department of Labor

Within the Department of Labor, in addition to the Apprentice Training Service (discussed above since an Executive Order has placed it for the duration under the WMC), are the Bureau of Labor Statistics and the Division of Labor Standards. The former has distributed many publications to help labor in industry effect sound collective bargaining. In 1945, to mention only a few such publications, the Bureau distributed "Preparing a Steward's Manual", "Settling Plant Grievances", "Foremen's Guide to Labor Relations", "A Guide to Labor Legislation for Supervisors and Shop Stewards", and "Improvement of Labor-Utilization Procedures". The CIO and AF of L both endorse an extension of the Division of Labor Standards' service of guidance, information and material on workers' education.[2]

7. Workers' Education

Workers' education is a broader concept than employee training, but since it is so closely related to the subject, it warrants some consideration here. In the U.S. there has been little public support of workers' education on a non-relief basis (cf. WPA).[3]

1. See p. 43f.
2. "Report of Education Directors' Conference" (CIO), Washington, D.C., March, 1945, p. 3.
3. Coit, Eleanor G., "Government Support of Workers' Education", American Labor Education Service, New York, 1940, p. 52.

Some experience with the use of state funds is found in California, where the State Federation of Labor and the Extension Division of the University of California have cooperated in a program of workers' education.[1] The School for Workers at the University of Wisconsin, although its winter work was dropped for a few years through lack of provision by the Legislature, nevertheless is perhaps the outstanding example of a workers' education program given extensive state support over a continuous period of time.[2]

8. United States Maritime Service

The U.S. Maritime Service is a governmental agency entrusted with the task of training approximately 200,000 officers and men between July 11, 1942 and January 1, 1945. Although the original task was completed, the U.S.M.S., in October 1945, maintained a full training program.

Section 216 of the Merchant Marine Act of 1936 provided for and directed the United States Maritime Commission to set up a training organization for the purpose of training officers and unlicensed men to handle the newly built vessels. By Executive order of the President, the training program was placed under the jurisdiction of the War Shipping Administration for the duration of the war.[3] The

1. Kerchen, J.L., "Workers Education on the Pacific Coast", Workers' Education, June, 1934, p. 2.
2. Schwarztrauber, E.E., "The School for Workers", The School for Workers, University of Wisconsin, Madison, Wis., February, 1938.
3. War Shipping Administration, Training Organization, "Information Booklet - USMS", Washington, D.C., 1944, p. 15.

training program which has been adopted was evolved from thorough studies made of the systems in vogue in foreign nations, revised and augmented to meet the specific needs of our own manning problems.

Though designed originally to meet peacetime needs, the accelerated shipbuilding program necessitated many changes, shortening and streamlining the training courses and vast increases in training facilities.

The training courses that have been established are designed to meet the specific needs aboard the modern vessel. They include every activity aboard ship in the deck, engine, radio, steward, and hospital departments, and cover the training necessary to prepare licensed and unlicensed personnel.

The U.S.M.S. pays a base rate corresponding to one's active appointment ratings in addition to board, lodgings, and travel fare from point of enrollment. It is perhaps sufficient to note that the U.S.M.S. operates various types of schools and the curricula of training established at these schools covers every activity carried on abaord the merchant vessel.

The five types of training schools established by the United States Maritime Service are:[1]

1. United States Maritime Service Training Stations where new men entering the industry receive training in the deck, engine, or

1. Ibid., pp. 19, 20.

stewards departments.

2. United States Maritime Service Officers' Schools where seamen possessing the minimum required time at sea are given courses to become licensed officers in the deck or engine departments.

3. United States Maritime Service Radio Training Stations where qualified men receive training to become radio operators.

4. United States Maritime Service Upgrade Schools[1] which provide training courses in the deck, engine, or stewards department for men who possess the qualifications and required sea time to raise their ratings or licenses.

5. In addition, the United States Maritime Service operates special training courses for ship's carpenters; assistant purser-hospital corpsmen; signal schools; barrage balloon schools; convoy procedure, and communications courses; turbo-electric schools; refresher courses for men returning to sea; and correspondence courses for men at sea.

B. EMERGENCY TRAINING SERVICES

1. Engineering, Science, and Management War Training

To meet the war-time demand for professional men, within the U.S. Office of Education in 1940 there was established an Engineering, Science, and Management War Training (ESMWT) program.[2] ESMWT, in co-

1. War Shipping Administration Training Organization, "Upgrading Schools - U.S.M.S.", Washington, D.C., April 1944, pp. 1-46.
2. Engineering, Science, and Management War Training Program Established in the United States Office of Education, Federal Security Agency, by Public Law No. 812, approved October 9, 1940.

operation with colleges and universities, provided short courses of college grade designed to meet the shortage of engineers, chemists, physicists, and production supervisors in fields essential to the National War effort.

All of these courses, whether elementary or advanced, pre-employment or upgrading, were free. The Federal Government paid all costs of instruction, leaving only the cost of textbooks and minor supplies to be met by the trainee. If one desired full-time instruction, he was accomodated in classes that met daytimes for about 40 hours a week. If his time was more fully occupied, he attended evening classes two or more nights a week. Whichever he chose, the courses could have been completed in from 8 to 16 weeks.

The 200 participating institutions conducted ESMWT classes throughout the Nation in over 1,000 towns and cities near the homes and workplaces of those who wished to enroll.[1] The ESMWT Institutional Representatives at those institutions published the dates and locations at which courses started and handled details of enrollment.[2]

ESMWT was established primarily[3] to serve three main groups of applicants:

1. See p. 70f. 12,000,000 men and women trained through all of the U.S. Office of Education's programs.
2. In Boston, the Dean of Northeastern University, Dean William White, headed the ESMWT program.
3. Case, George W., "ESMWT Colleges Meet Industry's Professional Training Needs", Manpower Review, Washington, D.C., April, 1944, pp. 7-9.

1. Unemployed high-school graduates lacking industrial experience who could be trained to perform essential jobs in engineering, chemistry, physics, or management. Necessarily, the bulk of ESMWT was concentrated here. Their instruction did not train them to be "fullfledged" engineers, chemists, physicists, or production supervisors, but rather prepared men and women to take part of the burden from the shoulders of key men. Thus, thousands of women were trained as engineering draftsmen, aircraft-stress computers, precision inspectors, and occupations calling for a similar level of skill.
2. More mature persons with professional or related experience either unemployed or employed in less-essential industries. These rapidly gained proficiency through ESMWT for employment in a critical field. Illustrative of this are the retraining of construction engineers for mechanical, electrical, and aeronautical engineering employment; the grooming of managers from less-essential industries for managerial posts in war work; and the advanced training of recent technical-college graduates.

The University of Chicago, Stanford University, Harvard University, the University of Pennsylvania, and the Illinois Institute of Technology, among others, succeeded admirably in refurbishing the talents of displaced executives. Typical members of a retraining class were married men, over forty, with one or two children. Most of them were college graduates. Upon

completing about 500 hours of class and laboratory work in modern war production expeditors, investment managers were employed as job evaluation technicians, and bank tellers made good as purchasing agents. Mature women, too, did well in these courses.

The recent college graduate often required somewhat different training. An ESMWT course in advanced mechanics offered at Brown University and at New York University turned such people into specialists in the mathematical analysis of research problems.

3. War Industry employees who could progress, through ESMWT, to jobs of greater responsibility. A very high proportion of ESMWT courses were designed, in consultation with war employers, for this purpose. ESMWT helped airplane draftsmen to become designers; General Electric designers were given instruction in electrical-induction, metallurgical equipment; Sperry Gyroscope employees took courses in advanced applications of mathematics, physics, and electronics to fire-control and flight instruments; and the personnel of companies engaged in the design and construction of new catalytic, petroleum-cracking plants attended ESMWT courses in heat exchanger and pressure-vessel design.

Professional engineers - chemists - physicists - management specialists - practically everyone in these slowly learned occupations was snapped up at the war's beginning. The shortage of such people

was at least partly averted through the cooperation of the colleges and universities which participated in ESMWT from 1940 to 1945. These institutions trained thousands of men and women through short courses so that the continued demands of war production could be met.[1]

ESMWT in 1944 was opened to shop stewards[2] through Pennsylvania State College which had previously done stewardship training work.

2. Food Production War Training

Before examining the Training Within Industry Service, we should note, in passing, the Food Production War Training (FPWT) program, the activities of which were coordinated by the War Manpower Commission's Bureau of Training (as are all agencies mentioned throughout - save U.S.M.S. and the service of the Veteran's Administration). Since no figures are available for the number of employees trained for industry by this program, we can but state that one of its purposes was to provide mechanical training for persons (for whom war production training was unavailable) who might enter war industries.[3] FPWT, in cooperation with State boards for vocational education and local boards of education, was specifically assigned to give training of less than college grade.

3. Training Within Industry

The Training Within Industry Service of the WMC has received

1. Ibid., p. 6.
2. C.I.O. "Report", op. cit., p. 3.
3. War Manpower Commission, op. cit., p. 3.

more publicity than any other training service although it was directed to a minority group in our economy-management's supervisors (labor's leaders have recently been included).

TWI's life history may be summarized by citing six events: TWI was (a) created by Council of National Defense in June 1940, (b) transferred to Office of Production Management on March 18, 1941, (c) transferred to War Production Board on January 16, 1942, (d) transferred to Federal Security Agency by Executive Order No. 9139 of April 18, 1942, (e) transferred to War Manpower Commission by Executive Order No. 9247 of September 17, 1942, (f) abolished May 22, 1945.

TWI itself assisted those responsible for training to identify needs, organize programs and increase effectiveness. This particular phase of the TWI program offered a four-day Institute for no more than ten men responsible for organizing training within their own establishments. They were given coaching and took part in practice sessions on how to plan training which met specific production needs and how to organize these training plans into an operating plant training program. The schedule of the Institute was three consecutive days and a fourth day one week later. During this one-week interval the ten participants worked in their own plants on the identification of production problems which could be met through training.[1]

TWI, in cooperation with State boards of vocational education, assisted first-line supervisors in acquiring skills in their

1. War Manpower Commission, op. cit., p. 8.

everyday on-the-job work.[1] The WMC recognized that the shortage of skilled and experienced supervision was the biggest handicap our war economy had to overcome and directed this program to help solve the problem through three, short, intensive training programs for employed supervisors: Job Instruction Training (JIT), Job Methods Training (JMT), and Job Relations Training (JRT):[2]

1. Job Instruction Training was an intensive ten-hour program of five two-hour sessions designed to give the supervisor or experienced worker practice in "how to break in" men on new jobs. TWI field staff members prepared plant men to put on this training program, or, in small plants, arranged for instruction by Trainers paid from State Vocational Education funds.
2. Job Methods Training helped management to make more effective use of the manpower, materials, and machinery available in their plants through fully using the inventive ability of their supervisory forces. In this ten-hour program supervisors practiced how to improve methods of doing jobs for which they were responsible. In a word, JMT made supervisors conscious of time and motion studies.
3. Job Relations Training gave the supervisor pointers and practice in how to work with people in a way that gains cooperation and

1. Ibid., p. 10.
2. Manpower Review, op. cit. p. 9.

promotes teamwork. It gave the supervisor training and practice in a method which (a) provided a good foundation for everyday relations with the people whose work he directed and (b) set up a pattern for handling the problems that do arise. In this 10-hour program supervisors brought in, for practice, plant situations with which they were currently dealing.

Well over 1,000,000[1] supervisors received certificates of completion of one or more of these three programs up to January, 1944. Only since that time has TWI aided in developing labor training programs[2] through JRT. Using the one successful principle - learn while doing - TWI's staff trained local union people who in turn trained union stewards along the lines that supervisors were trained in JRT as described above. The Shipbuilding Workers (CIO) started using TWI in 1944. Since the supervisor's manual needed to be revised for stewards, three union officials did it, but retained JRT's over simplified, basic four-step method for handling problems: 1. know objection; 2. get facts; 3. weigh and decide those facts; 4. take action (and check results). By June 1945, over 400 stewards were trained through the TWI program in the Shipbuilding Union alone.[3]

1. Ibid., p. 10.
2. CIO "Report", op. cit., p. 2.
3. Ibid., p. 2.

II FACTORS INFLUENCING THE POST-WAR STATUS OF TRAINING SERVICES

INTRODUCTION

In Part I, dealing with the situation of war time training services made available for industrial workers by the Government, we were able to consider factual data. Here, however, in establishing considerations that may collectively determine, to a greater or lesser degree, the post-war status of these services, we must necessarily evaluate opinions, impressions, and estimates, as well as factual data. The status of these services would be easier to determine if there were clear agreement as to size and nature of the need (demand) for training or retraining and as to how well the war services performed their function. We shall cite the services which have had enabling acts, and consider proposals and statements by influential parties or groups. The purpose of this whole section will be to accumulate evidence upon which intelligent conclusions may be based in answering three questions: 1. which training services will continue to be available in the post-war? 2. which ones may continue? and 3. which ones will not be available through the Government?

A. EVIDENCE OF NEED

1. The Big Shift

That the need for retraining millions of workers exists is indisputable.[1] The Chairman of the War Production Board, Mr. Krug, stated before V-J Day that "at least 7,000,000 men and women will shift place of employment"[2] due to contract cancellations. In April 1944, the WMC anticipated the "task of past-war reconversion will involve realigning the whole labor force of some 30,000,000 persons".[3] On October 1, 1945, Mr. John W. Snyder, Director of the Office of War Mobilization and Reconversion, issued his report entitled "Three Keys to Reconversion" in which he forecast an unemployment rise and a 40 to 50% increase in goods and services above pre-war levels.[4] In a capsule recapitulation of the human side of the transition from war to peace, Mr. Snyder said that 18,000,000 persons would have been released from war production or combat between Japan's surrender and the end of 1946 (9,700,000 from the armed services alone). The size of the big shift is then pretty clearly indicated at this point; that retraining will be needed is obvious; that the government will underwrite the training of perhaps 14,000,000 ex-service folk (within seven

1. On October 1, 1945, Mr. Joseph Salerno, Head of Mass. CIO, said in a telephone conversation with the author that "the CIO anticipates about 12,000,000 people to be seeking work between now and April 1, 1946." Mr. Salerno expected 8,000,000 would find jobs - thus leaving a minimum of 4,000,000 unemployed by April 1, 1946. Mr. Salerno stated that this estimate was generally accepted as reasonable by National CIO officials.
2. "The Christian Science Monitor", May 29, 1945, p. 1.
3. "Manpower Review", Vol. 11, no. 4, April 1944, p. 1.
4. "New York Times", October 2, 1945, pp. 1 and 16.

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3. "Manpower Review", Vol. 11, no. 4, April 1944, p. 1.
4. "New York Times", October 2, 1945, pp. 1 and 15.

to ten years) through the G.I. Bill, is indeed significant.

2. Baruch-Hancock Report

The Baruch-Hancock "Report on War and Post-War Adjustment Policies" has the dynamic theme "To Win the War and to Prepare for Peace". One recommendation is that the human side of reconversion be taken care of by providing retraining for veterans and war workers. By Executive Order on February 24, 1944, in line with recommendations of the Baruch report, the President set up in the Office of War Mobilization a Retraining and Reemployment Administration headed by Brig. Gen. Frank T. Hines, then the Administrator of Veterans Affairs.[1] With the assistance of a Retraining and Reemployment Policy Board, consisting of nine members (representing the Department of Labor, the Federal Security Agency, the War Manpower Commission, the Selective Service System, the Veterans Administration, the Civil Service Commission, the War Department, the Navy Department, and the War Production Board) the new Administration will have general supervision and direction of the activities of all Government agencies relating to the retraining and reemployment of persons discharged or released from the armed services or from other war work. It will issue regulations and directions and advise on emergency problems with appropriate committees of Congress, and will develop programs in consultation with the agencies represented on the Policy Board. In other words, the Executive Order directs the new Administration to

1. "Manpower Review", op. cit., p. 1

utilize existing agencies and function through them to the fullest extent possible, avoiding duplication and overlapping in the work now being done.[1]

3. National Resources Planning Board Report

Perhaps the first and clearest statement of the post-war training problem and recognition of the need for retraining was by the National Resources Planning Board. The Board's declaration is so relevant that it is worth quoting extensively:[2]

> "When hostilities cease, many million men and women who have been members of the armed services or workers in war industries will need to find employment in civilian activities, many of which have little or no relationship to the work they have been doing. Among those persons will be many who have never worked in a civilian occupation. Undoubtedly, several million of them will need either pre-employment training or retraining.*
>
> The training program will need to be as diversified as the present program for the training of workers in war industries. It will include full-time employment training for those preparing to enter new occupations; and training on the job with related training provided by schools, colleges, and universities, for those who are employed and need training to increase their effectiveness in present work or to prepare them for advancement.

1. June 8, 1945, President Truman announced he had accepted General Hines' resignation. The President has appointed General Omar Bradley as head of Veteran's Administration but the Administrator of Retraining and Reemployment has not been named at this writing in October, 1945.
2. National Resources Development Report for 1943, Part I, "Post-War Plan and Program", National Resources Planning Board, Washington, D.C., pp. 70-71.

* Underlined by author.

> Many of those demobilized will be youth whose education was interrupted by the war. For them a full-time program of general education, at the level of high school, college, or university, should be available. Others among those demobilized will need a part-time program of general adult education.
>
> No one can now foresee how many men and women serving in the armed forces or working in war industries will become injured or otherwise disabled to the degree that retraining will be necessary as a part of rehabilitation. Education should be prepared to provide whatever training proves to be needed for both war disabled and other disabled persons."

B. PROPOSALS

1. A New and Accepted Concept of Government

In all discussions of educational policy in the post-war years, the role of the federal government is a matter of much concern. There are divergent views, but the trend seems to be toward recognizing a function for the federal government which most educators a few years ago would have contemplated with great distrust.

Our traditional fear of a central government and, as a consequence, the determination to prohibit the federal government from participation in education, derives from a conception of the state no longer appropriate to a modern democracy.[1] Government was once an external, often an arbitrary, agency unconcerned with the vital concerns of the governed. With improved communications on the one hand

1. Johnson, E.F., "Which Way Education?", Information Service, Federal Council of the Churches of Christ in America, New York, N.Y., January 20, 1945, p. 8.

and a conception of interdependence that enables people to function fruitfully in the lives of others, a more intimate relationship between a government and its people has evolved. Our government is an extension of our own interests and concerns. It is the organized expression, the vehicle, of a people's will, designed to realize cooperatively ends that cannot be realized in isolation. Fear of government as such derived from an age in which government signified rule, not service. It dates from a period of arbitrary restraint and regulation antedating the creation through democratic means of common devices for ministering sensitively to men's needs. (In this instance, the need for a post-war training and educational program as diversified as the war-time one.)

2. Proposed National Education Board

Two recent books by educators have shown an awareness of the need of post-war participation by the Government in sponsoring and integrating educational and training programs.

The authors of one book[1] advocate federal and state support for equalizing educational and job opportunity. The authors state flatly the government-sponsored war-time programs have been characterized by a democratic policy and have made such an impact that they expect a continuance in post-war years.

1. Brooks, D.V.N., and Miller, J.H., "The Role of Education in War and After", Harper and Brothers, New York, 1944.

The authors of the other book[1] advocate as their major proposal the setting up of a National Emergency Education Board coordinated with such federal agencies as WMC, WPB, etc. The Board would be charged with developing a grand conception of organized education in America; translating this conception into actual programs; coordinating school and non-school educational agencies; seeking to integrate with the schools and with one another the educational functions and efforts associated with the armed forces and the various federal agencies. The authors, presumably, would be only partially satisfied with the Retraining and Reemployment Administration headed by General Hines, and now, presumably, by General Bradley.

3. Murray-Kilgore Bill

A concrete proposal designed to meet the need for retraining in the post-war was incorporated in the Murray-Kilgore Bill. Since this proposal is so indicative of the trend of the time and so illustrative of various reactions, its fate invites investigation.

This discussion of the Murray-Kilgore bill is divided into three main sections: one part merely lists the provisions of the original bill paying particular attention to the training provisions, the second part contains a critical analysis of the congressional debate on training which resulted finally in a complete change from the original intent of the authors, and the third part underlines what may

1. Melby, E.O., "Mobilizing Educational Resources", (Written in collaboration with Melby, as Editor, by Harold Benjamin, Kenneth Benne, Theodore Brameld, George S. Counts.) Harper and Brothers, New York, 1943.

be, historically, the significance of the episode. The whole emphasis herein is on training.

On August 1, 1944, the bill (S. 2061) was placed on calendar[1] of U.S. Senate by Senator James Murray to provide a national program for war mobilization and post-war adjustment. Specifically the bill, termed Murray-Kilgore Bill, provided[2] in Title I for the creation of office of War Mobilization and adjustment with a Director and an administration staff to coordinate war agencies and to prepare for elimination or establishing bureaus created by Executive Order and do everything to foster full employment. Title II set forth policies to be followed in cutting back war production and resuming peacetime civilian production. Title III will be discussed fully below. Title IV directed the National Housing Authority's administrator to survey needs and to develop programs for private housing and public works needs.

Title III created a Retraining and Reemployment Administration whose Work Administrator would establish a unified reemployment program covering the recruitment, training, transfer and placement of returning servicement and workers in war and civilian production. The Work Administrator would be authorized to pay transportation of

1. A Bill, S. 2061 (Report No. 1036), "To provide a national program for war mobilization and post-war adjustment." 2nd Session, 78th Congress, Washington, D.C., August 5, 1944.
2. Report (to accompany S. 2061) Washington, D.C., August 5, 1944.

workers and ex-servicement, dependents and household effects from last previous residence to new jobs, to provide to any person with vocational free education for six months full-time study, or its equivalent, and maintenance ($50-$100). Mustering out payments in two installments ranging from $100-$150 would be paid veterans plus an additional installment for each year of active service. A government agency would be authorized to pay unemployment compensation based on average weekly wage earnings. Such compensation would range between $20-$35 depending on dependency status.

Now, let us direct concentrated attention to an examination or the arguments for and against Title III and what significance those arguments may bear in relation to the future.

Historically, the first acceptance of the provisions of Title III was in the Baruch Report[1] in which a Work Director was recommended to see that human side of demobilization is not forgotten "by developing adequate machinery for job placement of veterans and demobilized war workers, ...resumption of education interrupted by war, vocational training, the special employment problems of the great war industries and others." In the 1942-44 period there was much talk of "soldiers of the production front" in an effort to glamorize and make popular, through patriotic motif, the jobs needing workers in war

1. Congressional Record, "Proceedings and Debates of the 78th Congress," 2nd Session, Vol. 90, No. 125, Washington, D.C., August 10, 1944, p. 6906.

industries. While Baruch[1] assumed the concept had caught on, the A.F.L. and C.I.O. were the only organized groups giving lip service to such an analogy. The mass of public opinion could not accept the idea, because of the obvious pay differential and Congress' failure to pass a National Service Act. The American Legion was quick to seize upon this point as shall be shown later.[2] But the Baruch Report focused attention on the need for training (or retraining) not only of veterans but also of war workers. With the exception of Senator Robert A. Taft (R., Ohio) no Congressman raised the point that retraining was not necessary or should not be given. The objection was to the classification of veterans and war workers in the same category and to the way the administration of such a provision should be carried out.

The Senate gave the "Murray-Kilgore" Bill a "legislative mauling"[3] as Representative Thomas A. Jenkins (R., Ohio) described it, when Senator James E. Murray (D., Montana) proposed his bill as an amendment[4] to (S. 205) a bill to amend the Social Security Act, popularly known as the George bill. The House's Ways and Means Committee so dissected the George bill that, since it was unrecognizable, the Dingell bill was substituted for the Ways and Means Committee's version, and, although Representative John D. Dingell (D., Michigan)

1. Ibid., pp. 6907f.
2. See three pages later.
3. Congressional Record, op. cit., No. 125, August 10, 1944, p. 6910f.
4. Congressional Record, op. cit., No. 123, August 8, 1944, pp. 5835f.

admitted he was not familiar with what it said,[1] it proved to be suspiciously similar to the George bill passed by the Senate. The George bill emphasized the need for broadening the base of coverage by social security, but took every precaution to guard against "federalization of State unemployment insurance systems while displaying a complete lack of understanding of the post-war unemployment problem (for example, merchant mariners, arsenal, ship yards, navy yard, munition, etc., workers are not covered).[2] But still we shall keep an eye on the elusive, proverbial ball and trace the philosophy of Congressmen on employee training regardless of the four (and the final compromise fifth) bills in which it appears.

Senator Murray and Senator Walter F. Goerge (D., Georgia) both plagiarized Baruch (Hancock) terminology in approaching "human demobilization". Whereas unemployment compensation is a negative approach to the unemployment problem, retraining is a positive one. Senator Murray stated that in recognition of the fact that expaning civilian production will inevitably call for new skills, his amendment, would provide "a comprehensive program of vocational training and education to take care of unemployment situations which will nevertheless arise in special areas of the economy and for limited periods of time." Congress recognized training as the sine qua non of the war production

1. Congressional Record, op. cit., No. 138, August 29, 1944, pp. 7339f.
2. "The Washington Post", Washington, D.C., August 28, 1944, Editorial Page.

goal and in every contract let by agents of the U.S. five per cent of the total contract price was allowed for the training of workers.[1] A similar principle[2] was accepted and supported in the training phase of WPA program. June 30, 1942 General Fleming reported that it always had been the policy of WPA to assign workers to projects to retain skills or to train new skills to more readily fit private industry's demands. Congress granted funds to NYA, CAA, Dept. of Labor, and Office of Education that was spent on vocational training, but national socialism did not result (as predicted at the proposal of the Murray-Kilgore amendment). These precedents were not mentioned in Congressional debate of these issues, but rather testimonials from AFL and CIO were read in support of both the Murray-Kilgore bill and/or the George bill.

The reasons why individuals and groups opposed these measures are interesting: let us start with the American Legion and then examine the main worries of Congressmen.

An analysis of the American Legion's objection[3] points to one single fear - the leveling of the benefits of a veteran to those of a non-veteran. The Legion did not comment on the need of retraining (assumed it is necessary) but expressed disapproval of (a) placing any matter of veterans under anything save the Veteran's Administration (b) classifying civilians with veterans in matters of unemployment

1. "Congressional Record", op. cit., p. 6835f.
2. Federal Works Agency, "Report on Progress of the WPA Program," Washington, D.C., June 30, 1942, pp. 7 and 27-29.
3. Congressional Record,, op. cit., No. 124, August 9, 1944, p. 6886.

compensation, reemployment, retraining and education. In short, the Legion argued that the veterans are a special, privileged groups who should get the biggest piece of pork from the legislative barrel. We shall not discuss the motive of the Legion to perpetuate itself in power by championing the new veteran's cause when almost all of its present-day membership is civilian workers.

Senator George D. Aiken (R., Vermont), apparently in sympathy with the principle of federal coordination of employee training, feared the Work Administrator would have the power to demand the worker to go to a prescribed school under penalty of losing compensation. This interpretation was farfetched, but Senators George, Kilgore and Murray were willing to accept an amendment to clarify the point.[1] "The intent," said Senator Harley M. Kilgore (D., West Virginia), "was only to provide training where training was necessary. In other words, if he wanted a job and was not trained for it, he could get the training necessary for that job, if it was the only suitable one to be found for him."

Senator Chapman Revercomb (R., West Virginia) has several objections[2] which may be summarized as a fear of the "unlimited" powers of an administration who could "regiment" the workers by selecting "any" person or number of persons (even non-citizens), training them

1. Ibid., pp. 6881f.
2. Ibid., pp. 6881f and 6889

"anyplace", and placing them "appropriately". Congress, said Senator Revercomb, is not justified in educating people for six months at public expense. He apparently forgot (a) the eighteen-month provision of the WPA (et alteri) which was extended for special groups, (b) the intent and philosophy of the bill, (c) the attitude of American worker who even in war time objects very strenuously to any encroachment upon his liberties, (d) eighty-six educational activities of present agencies.

Senator Taft felt workmen "presumably have learned the general character of the work in which they have been engaged" and so do not need training. Such a complete lack of understanding of what has happened in industry is pitiful. War workers have had job instruction which means the millions on war work know well how to perform one simple job (as Northeastern's Dean White said to the author, "A segment of a profession or a skill is the most they know."). Senator Taft further[1] objected because the Murray-Kilgore bill would suppress "self-government". Actually, it would simply put a floor under unemployment compensation, maintain U.S.E.S. in existence as clearing house, and coordinate and publicize local training facilities (once again, Senator Taft's cry[2] of "state socialism" is without basis). The Senator went on to declare the bill "destructive to the American economy, unconstitutional, destroyer of individual liberty" while Senator Claude D. Pepper (D., Florida) refuted such a claim with

1. Congressional Record, op. cit., No. 125, August 10, 1944, p. 6910f.
2. Ibid., p. 6911.

the fact that state's rights are inferior "to rights of men, women and children to live fruitful and righteous lives with their fellow men under God". These two statements are cited as evidence of the difficulty to trace development of a training-philosophy. Even Senator Taft would favor (the George amendment to the original George bill) a powerless administrator who would recommend to Congress where training facilities ought to be expanded.

When the Senate bill (the George bill) reached the floor of the House of Representatives the provision for retraining had been completely deleted. Representative Robert L. Doughton (D., North Carolina), Chairman of Ways and Means Committee, said the reason for the omission was because of the cost element rather than objection to the principle involved or disagreement as to administration. Representative Daniel A. Reed (R., New York) feared that the inclusion of an executive director would make the provisions "political bait", and turned attention of the House to the Federal Security Agency and Veteran's Administration whose functions are already defined and are being performed.[2] Mr. Thomas A. Jenkins cited "tremendous sentiment in the Nation opposed to Federal Government's entry into school system." (The dilemma in this issue comes from conflict in the system of checks and balances and the outright gift of Federal funds without

1. Ibid., p. 6911.
2. Ibid., p. 6913.

management or control as to their allocation for fear of encroachment upon state's rights.) The Dingell bill, proposed as an amendment to the House Committee's version, started the debate all over again just as it appeared the training provision was lost. Representative Emanuel Celler (D., New York) was the chief proponent of this revamped Murray-Kilgore bill and had the backing of all organized labor. Mr. Daniel A. Reed cited[1] the Smith-Hughes Act of 1917 and George-Deen Act of 1936 providing for widespread development of vocational training as a cooperative activity between the State and Federal governments. The facilities have been long established and the relationship is deep rooted and friendly. The Dingell substitute bill was defeated[2] on August 31, 1944 by a voted of 113 to 41 and before the House passed[3] the George bill a joint committee had agreed that the Retraining Administrator's function would be to confer with existing Federal and State and local agencies for purpose of coordinating activities. Consider how dissimilar this is from the original provision.

This historic episode may have revealed some significant points; such as (a) Congress accepted training as a necessary function of scientific management, (b) Congress expressed its constitutional right to take care of welfare of workers by reaffirming support

1. Congressional Record, op. cit., No. 139, August 30, 1944, p. 7455f.
2. Congressional Record, op. cit., No. 140, August 31, 1944, p. 7543.
3. Congressional Record, op. cit., No. 153, September 20, 1944, p. 8089.

to agencies offering vocational training, (c) Congress is reluctant to legislate a planned economy; not even one which would have the Federal Government pay the cost of selecting, training and transporting workers, (d) Congress shows a woeful lack of understanding of problem of training and what the existing agencies are actually doing (not once was the WMC program mentioned in debate), (e) Congress will carefully examine any legislation mentioning veterans but will listen very carefully to the will of the constituency before acting upon such proposals.

4. Labor Extension Program

A bill for a labor extension program to be introduced soon to Congress will, if passed, influence the role of the Government in workers' education. The Special Services Committee in Ann Arbor, a group of private individuals with enough money to donate to causes they feel should be supported, has offered to provide $10,000 to a responsible labor advisory committee to work for a workers' education program carried on by the government; i.e., a special bureau in the Department of Labor responsible directly to the Secretary of Labor. This would necessitate the introduction of a new bill, drawn from a bill introduced in 1944 by Senator Thomas of Utah asking for $20,000,000 for adult education, asking for $10,000,000 for workers' education and providing for a labor advisory committee and full labor participation in setting up the program. "A meeting was held with people

present from the Special Service Committee, the AFL and the CIO, at which the AFL and CIO were asked to contribute $5,000 each to match the Committee's contribution of $10,000", states a CIO report.[1]

The CIO recognizes that the need for workers' education must be either obvious or proved to exist, and phrased its sentiments thusly: "The need is pressing, but no program will be possible without a tremendous indication of need and demand. The AFL and CIO are already on record for a labor program and the CIO would doubtlessly support such a program."[2]

What is the place of public support in a permanent program of workers' education in this country? The answer to this question, concluded Eleanor G. Coit, Director, American Labor Education Service, lies partly in experimentation and testing in the adaptation of legislation for education to the needs of workers' groups. It lies in part, also, in the assumption of responsibility for an educational program by a strengthened labor movement, active in the political as well as the industrial field; and in its skill and understanding in working with public authorities in planning for the use and control of public assistancé, in developing a permanent and effective program of workers' education in the country.[3]

This brings us immediately to the ability of the public to support an adequate program of workers' education. Certainly it

1. CIO "Report", op. cit., p. 4.
2. Ibid., p. 4.
3. Coit, Eleanor G., "Government Support of Education," American Labor Education Service, New York, N.Y., 1940, p. 58.

cannot be done on the basis of state and district support. It has been sufficiently shown by the report of the President's Advisory Committee on Education that the poorer states economically have not sufficient taxable wealth in proportion to the number of children of school age to support the present program of education.[1] To do that, the financial aid of the federal government is necessary. It is apparent then that the expansion of the program of education to meet the needs of the vast army of workers can be made only when such aid is forthcoming.[2]

C. IN THE FUTURE

1. G.I. Bill

The implications of any piece of legislation that may affect the training of almost 14,000,000 potential employees deserves careful consideration.

Early in 1945, an estimate was published[3] that 1,000,000 returning men and women will seek at least one year of higher education; from 300,000 to 400,000 two years; from 200,000 to 300,000 three years; and at least 100,000 four years. The size of such a training program available through the G.I. Bill is tremendous. Consider too that, in some fields of civilian life, there will be an

1. The Advisory Committee on Education, "Report to the Committee", U.S. Government Printing Office, Washington, D.C., 1938.
2. Baker, Frank E., "Relations With Public Education", Workers' Education in the U.S., Harper & Brothers, New York, N.Y., 1941, p. 246.
3. Johnson, Ernest F., op. cit., p. 7.

excess of trained personnel, and retraining programs will be needed. Thus, millions more may demand their right to the benefits of at least one year of training (regardless of age).[1]

On June 22, 1944, President Roosevelt signed an act "to provide Federal Government aid for the readjustment in civilian life of returning World War II veterans. The act, officially cited as "Servicemen's Readjustment Act of 1944" (public law 346-78th Congress - Chapter 268-2nd Session), is known popularly as the "G.I. Bill of Rights". Title II - Education of Veterans - concerns us here since no other single piece of legislation has granted such liberal education benefits to so many (14,000,000) people. To relate the significance of this provision to employee training in post-war industry it will be necessary to examine fully many details. Let us define who is eligible, what cash allowances are provided, and the specific types of training allowed by the Administrator of Veteran's Affairs. A special section will be devoted to the attention of apprentice training.

Above, the figure of 14,000,000 eligibles was mentioned. The bill provides that any person who served in active duty for 90 days on or before September 16, 1940 (effective date of Selective Service Act), and prior to termination of the present war shall be

1. As Congress reconvened in September, 1945, there were 1,500 amendments to the G.I. Bill proposed.

eligible for training for a period depending upon his length of service, type of discharge, and age. No benefit is to extend beyond seven years after the termination of the emergency; however, a man with nine years service if discharged for any reason save dishonorable would start his education and training in 1945 and, assuming two more years before the emergency is declared to be at an end, he could be eligible for nine full years at government expense. (Such a case is not inconceivable. A friend of the author has set up such a program for himself.)

A consideration of the wording of the bill, then, would have us conclude that all service men and all service women are eligible and the most conservative estimates of the total service personnel, including those already discharged, arrive at a figure of 14,000,000 service personnel before V-J day.[1] This figure need not be modified even after noting that anyone not over 25 years of age at the time he entered the service must "have had his education or training impeded, delayed, interrupted or interfered with" because of entry. Relatively few men and women interested in college education were over 25 years when they entered service and these have little trouble to show active duty has not caused a disruption of their training to get, maintain, or progress in their job.

1. Indications in September, 1945, that Selective Service will be continued for at least two years lead us to consider 14,000,000 eligibles as a conservative estimate.

Many of the service folk already discharged because they are unfit for military service are eligible for the benefits of Public Law Number 16, Seventy-eighth Congress, by reason of the fact that said law provides Vocational Readjustment and Rehabilitation for Disabled Veterans of World War II. This fact does not make disabled veterans ineligible for the G.I. Bill; rather, it gives them the opportunity to choose whichever program they deem will be more advantageous to them. So, the present 1,000,000 or more discharged, for reasons other than dishonorable, are eligible for the educational provisions and constitute a part of the potential 14,000,000.

The G.I. Bill allows $50 per month if without a dependent and $75 per month if with dependents for subsistence while in training. The term subsistence is aptly chosen because such an allowance per se permits only a level of subsistence in our economic stratum. The selection of the arbitrary figures of $50 and $75 is probably wise since it must be high enough so that a person will maintain health and decency, but yet it must be low enough so as not to be an encouragement to "educational bums" (such as were experienced after the last war). Persons attending a course on a part-time basis or "receiving compensation for productive or other training on the job at institutions, business or other establishments" shall be entitled to such lesser sums (as allowances) as may be determined by the Administrator.

The decision of the Administrator is to pay allowances for

"other training". Conceive the tremendous incentive to industry to hire veterans and to train them. Less than 30% of present service personnel had a regular job before entering active duty. So 60% will need training for whatever job they get. A negligible number of the 30% group will not need retraining. Industry in general, and New England industry in particular because of its need for skilled and semi-skilled men to produce its technical products, will do well to establish formal training programs and have them certified by the state department of education as capable of training or retraining a man for the specific job or occupation. Then an employer can say to an untrained veteran, "Look, Joe, you are worth only 50 to 65 cents per hour to me as a trainee. You need $50 per week to live as you would like. So, why not assure yourself of a steady job and a regular income as a trained man by taking a job as a trainee and getting the G.I. Bill allowances, thereby giving you an income of $50 a week until you will be worth that to me at the end of your training." The veteran too has many reasons for accepting such a proposition. This possibility has not been explored, as yet, but the potential value and good will of such a synthesis is tremendous.

As early as October 1944 (and many times since them) in a speech at New Bedford, the author has been pleading with various employer's groups to plan for a synthesis between the G.I. Bill benefits and Selective Service reemployment rights. The suggested program was quite different from the on-the-job-training possibilities as outlined

above, but the end result of a loyal, appreciative well-trained man would be the same - but on a high job level.

The impetus for such an arrangement might well come from a progressive college (colleges or scientific and technical schools) to provide a curriculum that would train and educate men to be better supervisory material, aides to engineers, draftsmen, accountants, clerks, production and statistical control experts, technicians of all kinds, etc. A company would, under such a plan of study, suggest the type of course to follow, count his seniority from the day he enters school, have the Veteran's Administrator pay the customary fees to the institution, and supplement the veteran's income with an amount at least equal ($50-$75) to the subsistance allowance. For a very small investment the company would get (by contrast) the services of a readjusted man, trained especially for the vacant job. Such training might last from six months to four years and should include orientation to company policies and practices. Professional (the best) educators would train men in a company-approved curriculum. No one denies the need for training men to fill the jobs requiring skilled men (only a piddling amount of whom have been trained during the War). Is it not advisable for planning to obtain a combination of the facilities we have and the labor resource we shall have in order to effect the "best type" working force yet known in this, or any, country?

2. Continuous Training is Necessary

The several instances, already cited, of expressions of anticipated demand for training services (perhaps sponsored by the

government) have been further supported by private interviews and correspondence. An awaking that "the training and education of supervisory management is a continuous process" is revealed in "Supervisory Management" a booklet issued recently by the National Association of Manufacturers.[1] Dr. R.B.W. Hutt, Training Director of the Ensign-Bickford Company, has expressed a unanimous decision of New England training men that employee training is not an ephemeral thing predestined to abandonment now that the war is over when he wrote that present emphasis on upgrading indicates all training must be continuous. Dr. Hutt also is representing a general feeling when he says,[2]

> "It is certain that employee training will prove to be more than merely for the duration. Savings in training time have been demonstrated. Worker attitudes, after careful training, have proven satisfactory. Only by training, have first line supervisors been brought to an adequate realization of the importance of their functions as direct representatives of management in company-worker relations.
>
> It is anticipated that competition will be keen after the war and that the margin of efficiency difference between companies with well trained and well motivated employees and those companies lacking these things may prove crucial."

3. Training is a Local Problem.

Only two conservative estimates of the scope of the training problem have been discovered. One very recent article emphasizes the problem that job shifting is not universal, and so may lessen the demand for retraining in particular industries or locales, but even this

1. National Association of Manufacturers, "Supervising Management," New York, 1944.
2. In letter to author in March, 1945.

article concludes millions will be forced to new jobs.[1] The other conservative (or pessimistic) tone is sensed in a letter from William Snyder, Secretary of International Typographical Union.[2]

Let us examine, first, the debunking of the theory that everyone will change-over and there will be delays everyplace before civilian goods will be produced.

The Baruch-Hancock report of 1944 declared that "a relatively small proportion of American industry will have a reconversion problem in the true meaning of the word." Reconversion means a physical change in the plant; not shifting from war orders to peacetime orders on the same product.

Thus the huge, vitally important textile industry has no reconversion ahead. It will continue to make most of the products now on its looms. Rolling mills for metals have only to change their rolls to make another product. They do it every day, in peace or war.

The excellent survey made by the industrial publication Steel supports the Baruch-Hancock report. It shows that only 15 per cent of the metalworking industry's plants face total reconversion.[3]

"Actually," the survey reports, "49.4 per cent are making the same products as before the war, while 36.6 per cent are partially engaged on prewar products."

1. See following paragraphs.
2. See two pages later.
3. Browning, Arthur, "Will there be a job for Mrs. Jones?", The Christian Science Monitor, June 2, 1945, p. 3.

Steel's survey found that 80.4 per cent of all plants that changed products for the war will go back to their former products; 17.3 per cent will go back partially: and "only 2.3 per cent will not take up their old work to any extent."

Still more interesting, with reference to long delays, the survey found that 74.4 per cent of steel-industry plants expect to reconvert immediately; 15.6 per cent will require a month; 3.6 per cent three months; and 6.1 per cent six months or more.

Thus, we may imply the training problem will vary from industry to industry and from plant to plant. We can support Arthur Browning's statement that,

> "Reconversion is not as much an adjustment of machines as of human affairs. The most helpful quality we can bring to it will be fluidity. Undoubtedly, movements and counter movements, pressures of all kinds, in concert and in opposition, will force millions of wartime workers out of job lines, and back to former occupations and conditions."

Mr. Snyder's attitude is not typical of the whole labor movement, but must be considered because of the powerful pressures that conservative A.F.L. unions exert. Mr. Snyder states that personnel experts have told him they expect trouble in downgrading and retraining. He would frown on large training programs to train skilled workers and would give little support to expanding governmental budgets for vocational training. His own words are quite clear, as he wrote to the author on May 4, 1945.

> "In the industries where training has been neglected because the war effort drained off usual sources of

recruitment we find (in the printing, building trades, etc.) employers calling for large-scale training programs. They are opposed by the trade unions who claim that the employers are seeking to flood the trades with more workers than can be absorbed.

Always in the training picture are the vocational schools. The physical plants of the schools were greatly expanded in the service of the war effort. Administrators and teaching personnel have a vested interest in keeping them expanded and in justifying their swollen appropriations in the governmental budgets. The schools, therefore, have been casting covetous eyes on the generous financial provisions of the G.I. Bill of Rights for educational purposes.

However, labor has traditionally evaluated training limited to schools as being "prevocational" and has often irritated the schoolmen by not recognizing or only partially recognizing credits granted by the schools.

Labor's attitude toward the schools derives from its experience that even though the vocational schools owe their very existence to the trade union movement, which campaigned for their establishment, that the schools have been used against the best interests of the workers and the nation. Many skilled craftsmen feel that the schools are run and staffed by men of limited industrial experience and that they flood the trades with semi-skilled workers to the detriment of their standards and working conditions."

4. The Cost Element

There is a powerful incentive for management to encourage a post-war employee training service by the Government. The wartime extensive service was paid for entirely by the Government. Even when the training service was a consultative one the cost to management was borne by the Government since every wartime contract carried a 5% allowance to take care of the cost of training

employees.[1] When goods are produced under private contracts in the post-war, the cost of training employees will have to be added to the selling price, or deducted from profits, or shared by the buyer and the manufacturer. The cost element would, in general, motivate management to encourage a continuance and an extension of training services made available through the Government.

D. EVALUATIONS

1. Scientific Analysis

The discussion throughout has progressed on the assumption that the wartime governmental services were doing the kind of job that was needed. Perhaps, we should try to determine how well that job was done. Whether or not the services will continue is conditioned by how well they did, No formal evaluation has been made, even by the WMC, of wartime training services. The Bureau of Training has revealed only a few of the thousands of testimonials. The various State Departments of Education pass off Industry's appreciation with the remark, "We are too busy to stop for pats-on-the-back". Only personal contacts reveal that most training men like their work and are cooperative with anyone who may be interested in perpetuating them in their job. They "sense" whether or not their efforts are filling a need. They are always seeking evidence to prove their supply of services meets the demand. In order to justify their existence, they must

1. See p. 34 - as quoted from the Congressional Record.

provide a needed service, and so they gear their activities to meet needs that are continually changing.

Individual reactions from labor and management are unanimous in the praise of every activity of the WMC's Bureau'of Training. This is not to say there have been no criticisms. Management and labor have made similar observations about the TWI program: (a) it is very simple, perhaps it would be too simple if so many people did not overlook these simple procedures; (b) in the absence of anything better, it is fine (things are good only relatively); (c) it is clear, succint but not inclusive enough and takes too much time on one phase; (d) it is weighted on the side of management.[1] These comments are sound, but are not valid as criticism when we consider the level to which the program was directed and that the manuals were written for industry in general and were intended to be interpreted to meet an individual plant's needs.

Perhaps the only scientific evaluation through statistical analysis of any program has been made by Roy W. Bixler.[2] The ESMWT staff received many letters from employers indicating that the participating institutions were doing a splendid job of determining training needs and operating appropriate courses. While there was strong justification of confidence in the efficacy of the program in

1. CIO "Report," op. cit., p. 3.
2. Bixler, Roy W., "How Well is the ESMWT Program Serving War Production Training Needs?", Journal of Engineering Education, Vol. 34, No. 8, April, 1944, pp. 526-531.

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2. Tixier, Roy W., "How Well is the ESWT Program Serving Her Production Training Needs?", Journal of Engineering Education, Vol. 34, No. 8, April, 1944, pp. 880-881.

this respect, and since members of the staff were constantly seeking verifying evidences, Bixler was commissioned to study how well the program was serving training needs. We may summarize his finding in four points: a. Highly significant positive correlations were found to exist between the ranks of the states in volume of war production and volume of training activity. b. These high correlations have prevailed since the beginning of the training program in 1940. c. Both training activity and war production have been largely concentrated in seventeen states. d. Active enrollments, on November 30, 1943, were found to be concentrated in areas of critical and imminent shortage.

Three justified conclusions may be drawn from Bixler's study: a. The highly significant correlations between the ranks of the states in volume of training and volume of war production justify the conclusion that E.S.M.W.T. placed training in the localities where war production was going forward. b. The concentration of training activity in areas of labor shortage warrant the conclusion that the 1943-1944 E.S.M.W.T. Program was sensitive and responsive to the training needs created by conditions of the labor market in the war production program. c. Therefore, the findings of the study warrant the general conclusion that E.S.M.W.T. served the training needs created by the war production program.

2. Individual Opinions

Professor Paul H. Nystrom of Columbia wrote[1] the author

1. In December, 1944.

that it is his impression "that there are very few companies that have compiled the evidence in black and white on the need for training", so we may accept individual statements of endorsement of war training and its relation to the post-war as satisfactory evidence in determining how good it has been and if it will be continued. Restrictions of space necessitate a selection of a few statements that represent the feeling of approximately one-hundred training directors. For example, the Electric Boat Company of Groton, Connecticut states, "we are convinced that the production knowledge required today must be obtained by an intensive use of all type of training facilities combined with in-plant instruction". Just as typical is U.S. Rubber Company's Naugatuck Plant Manager's statement. Mr. H.L. Carter wrote,[1] within the last few months,

> "We strongly feel that training heads the list of aids in getting greater quality production in less time. Management often questions those efforts which produce somewhat intangible or long-term results.
>
> The Naugatuck Footwear Division of the United States Rubber Company has always recognized the value of training. Today, when confronted with the changes, increases, and interruptions of war production, the dubious intangibles have become vivid dollar and cents advantages. The real worth of long-term training has been brought home to us.
>
> Not only our own program but the government-sponsored Training Within Industry sessions have pointed out again how instrumental training has been in keeping the worker satisfied, in getting higher quality, in

1. Sent author copy of letter prepared for WMC.

> shortening the orientation period, in getting more production faster, and in making the best use of the people we do have.
>
> It is our sincere belief that if industry does concentrate on holding what help we do have throughmore and better training, we will be doing a lot to speed up the war of production and hasten victory."

The Industrial Secretary of Associated Industries of Massachusetts, Mr. F.V. Bistrup, comes forward with a significant statement that would have us believe that Industry wants all the war training services to continue in the post-war period:[1]

> "The principal credit for the accomplishment of this huge program, I believe, should be given to the Training in Industry Program connected with the War Manpower Commission; to our state vocational schools and the technical schools and colleges of the state who participated in the Engineering Science and Management courses sponsored by the government in cooperation with these colleges.
>
> In the Post-War period I should think it would be most logical to expect that similar methods would be used. Certainly the experience in these last few years have demonstrated the efficiency of these plans."

At present, there is a disagreement as to the type of training to be given. (It is significant to note in this discussion an assumption of Government cooperation in training programs.) Mr. L. G. McKenney of Hood Rubber Company, Watertown, senses[2] a replacement of the apprenticeship system with vestibule training. Mr. William

1. Letter to author April, 1945.
2. Letter to author May, 1945.

Snyder of International Typographical Union says labor particularly the craft unions, are committed to the apprenticeship principle.[1] Mr. C.R. Dooley, Director of TWI and Socony Vacuum Company Training Director stated his feelings in a letter to Senator Thomas in connection with Hearings on the "G.I. Bill". To quote a section of a copy he sent the author,

> "It has been my experience in private industry, and as director of a Government training activity in World Wars I and II, that one of our most serious manpower deficiencies lies in a shortage of all-round skilled workers. If we could have gotten our apprenticeship program well enough under way in peacetime to have had enough men trained to fill the essential supervisory jobs in war industries, our problem of training and even of production sould have been greatly simplified.
>
> "While the recommendation I am endorsing will tend to strengthen the apprenticeship program and assist in producing the kind of trained men we need in peace as well as war, I feel that the principal consideration is the fact that the Nation should help these men to secure the training which otherwise they will lose because of their service to the Nation."

What appears to be a difference of opinion is simply a failure to state that, because of the technology in manufacturing, some firms will be able to use men to perform some very specialized operations while other firms will need men of greater versatility. Mr. Ansel Cleary, Assistant Director Apprentice Training Service, has written[2] this reply to the question concerning TWI's program and its

1. See p. 49f.
2. May 1945.

effect on the thinking of those in industry with respect to apprenticeship,

> "....we are finding that both management and labor are taking a greater interest in training skilled workers than ever before. This trend we think is due to the fact that the experience generally is that narrowly trained workers are not sufficiently versatile and that both groups are growing more and more to appreciate the value and advantages in having workers with the broad skills which apprenticeship produces.
>
> "Industry has always done a certain amount of job training, and we are convinced that from the experience obtained in training new workers during the war period, management will have discovered proper training methods sufficiently profitable that there will be a considerable extension of the training effort over anything done in peacetime."

3. Other Considerations

Two final considerations must be mentioned in evaluating the training program of the W.M.C.: a. the time element and b. the number trained. We need not labor the point that time was of the essence in winning the war. The training of 20,000,000[1] men and women is testimony that speaks for the worth of the program. The impact of any factor in our economy that influences the lives of 20,000,000 workers is bound to leave a lasting impression. What exactly this impression will be cannot be determined in advance. It is not unlikely that workers and ex-service men and women may demand their right to be trained in order to survive on the economic battle-field in the post-war era.[2]

1. War Manpower Commission Bureau of Training, "Growth of Organized Training since 1940", Government Printing Office, Washington, April, 1944, pp. 1-21.
2. This concept of a right to be trained is a corollary to the one of a right to work.

E. CONCLUSIONS

The one inescapable conclusion to be drawn from the citation of the training services available during the war and the factors influencing the post-war status of Government training services is that it is impossible at this time to answer "Which war training services definitely will be available in the post-war era?"

As recently as the end of May 1945, the House of Representatives eliminated all appropriations for war training programs conducted by the U.S. Office of Education, and the Training Within Industry program, and reduced the defense appropriation of the Apprentice Training Service. Therefore, the only training programs, available during the VE to VJ-Day period and now the post-war period, are those conducted under the regular program of the Apprentice Training Service and the vocational programs under the regular Smith-Hughes and George-Deen funds, plus whatever carry over of ESMWT type of training that the colleges and universities see fit to offer.

In a letter to the author on June 11, 1945, Philip S. VanWyck, Director, Bureau of Training WMC, pointed out that a Bill, Senate 619, has been introduced which would provide $97,500,000 for an extension of all types of vocational training by the local vocational schools. What the fate of this Bill will be is impossible to predict at this time.

It is not to be concluded that cut backs by Congress in the period between VE and VJ-Day were indicative of a post-war Government

policy. The sentiment of the Nation is perhaps best expressed by the Connecticut Post-War Planning Board when it says that it is generally recognized that the Federal Government of the United States possesses a primary responsibility in attempting to deal with the problem of post-war training. Certainly in behalf of those who have been serving in the armed forces, the responsibility is clear for the provision of financial means to make additional education and training possible wherever needed or desired. Also, for those displaced by war industry, it is deemed wise, if unemployment on an unprecedented scale is to be avoided, for the Federal Government to facilitate the transfer from a war to peace economy through the provision of the financial means for retraining. Economic consideration alone still dictates the wisdom of such a course, in the light of the experience yielded by the depression in carrying the burden of unemployment relief.

Even though every statement as to the post-war status of training services must be qualified by a recognition of their dependency upon the employment situation, it is worthwhile to examine the present status of these agencies:

1. USES[2]
   Unquestionably, the United States Employment Service will continue to play an important role in the employment field. Its veteran's representatives bespeak

1. "Interim Report to the Connecticut Post-War Planning Board", by the Committee on Education, Hartford, Conn., July 1, 1944, p. 90.
2. United States Employment Service - see p. 2.

its perpetuation. Its testing service and referral service to training programs in accordance with occupational trends and needs will be relied upon by both employers and employees.

2. ATS[1]
Apprentice Training Service is, today, says Mr. Jenkins, New England Regional Supervisor, being demanded by employers more than ever. It is safe to expect a greater-than-ever demand for aid, added Mr. Johnson, his assistant, in an interview in May 1945, for service in establishing apprentice programs in the next ten years.

3. ESMWT
There is a great need in industry, declares the Connecticut Post-War Planning Board,[2] for the technical institute type of training, consisting of short intensive courses at the college level designed to fit persons for immediate practical duties. It is fairly safe to assume that a program similar to the ESMWT Program will be organized and financed by the Federal Government to assist in the retraining of war veterans and war workers.

1. Apprentice-Training Service - see p. 4.
2. "Interim Report", op. cit., p. 90.

Experience with the ESMWT Program has shown the effectiveness of instruction applied directly to specific jobs, and in the future, perhaps, more emphasis should be put on applications and less on principles in technician (but not professional) training, the Board continues.

Experience in ESMWT[1] has indicated the desirability of night schools in engineering colleges, and has resulted in increased recognition of the need and value of extension services and programs of adult education. It has also indicated a need for subsidized graduate study for Civil Service employees as well as for industrial employees - the Board states unqualifiedly.

4. VAS

The National Industrial Conference Board has reported[2] that employers intend to continue to demand the services of the Visual Aids Service to a greater extent in the post-war.

1. See pp. 16-20.
2. See p. 7f.

5. Vocational training for Production Workers: Above is cited a Bill currently under consideration to provide $97,500,000 for vocational training.[1] The experience of VTWPW[2] will be helpful in supplying teachers and curricula for any vocational training program.

To cite five concrete services that probably will continue (the degree to which they will continue is not yet clear), is to give only part of the picture. The aid to veterans is already prominent. The subsidy for war-workers retraining is confidently felt to be forthcoming.

The influence of other war training services in the post-war may not be experienced as Government sponsored programs, but undoubtedly all types of training will use, for example, TWI's techniques to a great extent.

Meantime, whether it be the result of a latent interest in training, or a part of the overall concern of industry for the control of market operations - apparently multiplying in intensity as the "post-war" consciousness of business men becomes more acute - the pressure for more information on the subject has been stepped up to a degree unsuspected at the time this assignment was undertaken.[3]

1. See first paragraph this section.
2. See pp. 8-10.
3. Witness to this demand for information is the studies of the C.E.D., primarily, and the statements in daily press of such men as Henry Kaiser and Eric Johnston.

In view of increasing pressure for information about training, it would be valuable indeed to have concluded at this point the post-war status of training services available through the Government. However, predictions, or intelligent guesses, are all that are warranted.

Both employers and employees have individually expressed the desirability of a continuation of a service similar to the war training programs. These expressions of a desire will not become crystallized as a pressure for legislation until the industrial economy experiences the pain of unemployment.

A greater consciousness of the need for more and better training has been developing since the war. The influence of military training will have conditioned millions to adjust to and to appreciate training for economic survival. The evidence of the extension of visual aids for training is overwhelming. The spread of the conference method is only natural. As one employer summed up, "It is cheaper for us to pay for good training than to double our personnel."[1]

With the recognition of the necessity for training to cut costs, to give the employee occupational dignity, etc., we note the insistence that training programs be (a) continuous and (b) modeled to fit the needs of each individual plant. The day of the pseudo-psychologist and one-shot inspirational pepper-upper is gone. To

1. Committee for Economic Development, "Selecting and Training Post-War Sales Personnel", No. 5, New York 1945, p. 7.

the visiting expert who pontificates, "Plan your work - and work your plan" employers and employees are asking more insistently "What work? What plan? How? Why?"

Since this recognition of training as the means to effective operation is so widespread, we may expect the Government to provide post-war training services at least for the unemployed and "small business".[1]

The whole post-war Government training service program will be conditioned by the employment situation. If unemployment is widespread, we may expect the Government to sponsor a program. If unemployment exists only for these in certain areas or with particular trades or skills, we may expect technician training programs sponsored by the Government based upon occupational family group. If "full employment" is our happy circumstance, training will be done almost entirely by private individuals and concerns since it will be virtually impossible to persuade a Congress to appropriate training funds in prosperity.

Many[2] feel established institutions (schools and colleges) have the physical facilities and personnel resources to provide specific services for industrial plant training programs. It is only a matter of time until such cooperative schemes will be worked out. We

1. Congress has before it in 1945 a proposal to establish a research unit for small business - an extension of which would be training services.
2. Such as Leo O'Neil, former Head of Economics Department, B.U.(C.B.A.) and Director Utilization of Manpower Civil Service Commission; Dean White, Northeastern; Dr. R.Small, Mass. Dept. of Education; Dr. Schell, Professor Industrial Relations, M.I.T.; et altèri.

do not do educators justice if we doubt their ability to wrangle a subsidy (if one is needed) out of Congress for any program. (Witness ASTP, NYA, Student Aid, G.I. Bill, etc.)

That the size and scope of Government sponsored training programs will depend upon the employment situation cannot be overemphasized. It is safe to say the Federal Government will have to help the economy to reconvert. Government aid can be expected to come as a staff relationship in the field of retraining. We may expect, at this writing, such a training to be bigger than before the war, but not so big as during the war. Perhaps, Government training programs will establish standards of quality and will develop techniques for improved training - in addition to working out ways for measuring the value of training programs. Beyond the five specific services listed above, the Government will be expected to subsidize vocational (pre-vocational) training, extension courses for workers' education, and supplementary training for all employees as the need develops.

There appears to be a great day coming for those interested in the training of employees and the role the Government will play in training will, in all probability, be tremendously influential.

PART III EMPLOYEE TRAINING IN POST-WAR INDUSTRY

INTRODUCTION

Parts I and II noted trends to be anticipated in the role played by Government training services in the post-war. Part III considers trends in training from a different angle. The opportunity suggested for colleges is one which has not been set down elsewhere although labor leaders and industrial men are receptive to the idea. The check points and the final outline of trends are not claimed to be the solution of all training problems in post-war industry, but they do indicate the main areas for investigation and consideration by those interested in employee training.

A. College Cooperation

1. Training for Industry

Considerable attention has been focused upon the ESMWT (see Part III, Section B). There is evidence that industry and labor are aware that colleges have the resources to be of service in training employees in the post-war.

Mr. R.C. Manhart, Manager of Training for Sylvania Inc., stated[1] that he is sure that industry and educational institutions have a grand opportunity "to work together in not only unfolding the

1. In letter to author, March 22, 1945.

story of the part which training has played in the magnificent production record of the war years but also in transferring many of its values into our peacetime production and distribution economy."

Labor, too, is conscious of what has been accomplished of late and the writings of leaders,[1] such as David Dubinsky and Mark Starr, would indicate a strong desire to cooperate both with educational institutions and management in developing the labor movement. Perhaps the failure of labor-sponsored colleges (because of lack of sufficient financial support) has influenced a change from the day when Henri DeMan wrote:[2]

> "When Labor strikes it says to its master:
> I shall no longer work at your command.
> When it votes for a party of its own, it says:
> I shall no longer vote at your command.
> When it creates its own colleges and classes, it says:
> I shall no longer think at your command.
> Labor's challenge to Education is the most fundamental
> of the three."

After five years of unprecedented activity, the vast Government-sponsored war training program is drawing to an end as this is being written. The impact of college level training on the thinking of management, labor, and educators in planning post-war training programs cannot be ignored. Since its founding as an emergency measure in 1940, the vocational project, under the direction of the United States Office of Education, trained 12,000,000 men and women for war

1. See p. 74f. et alter.
2. "Growing-up 1917-1938" I.L.G.W.U., Norfolk, 1938.

jobs, at a cost of $500,000,000. By way of comparison, 60,000 war workers were trained in public vocational schools during World War I.[1]

Colleges and industry learned to cooperate to a greater extent than ever before. Frequently, the colleges took the initiative and surveyed the area to find what type of program should be offered on the campus. Where the need for aviation workers existed, for example, the institutions stressed training for them. Courses were offered at any time of day or night, at any place that suited the needs of the workers involved.[2]

Direct savings to industry as a result of the training programs are impressive. One company reported a $10,000,000 annual saving. The accident rate dropped as much as 50 per cent. in plants where college courses in safety were installed.[3]

Perhaps Rutgers University can be cited as an illustration of how the colleges conducted the war training programs.[4] Since the project started, Rutgers trained 56,000 men and women, representing 1,500 industrial concerns in New Jersey. Courses designed especially for specific industries were conducted on the premises of 211 plants.

Graduate courses were offered for refresher and advanced training to chemists and engineers seeking material substitutes and more efficient methods of production. Management and labor were

1. Fine, Benjamin, "Education in Review", New York Times, June 3, 1945, p. 27.
2. Ibid., p. 27.
3. Ibid., p. 27.
4. Ibid., p. 27.

provided with 900 special classes for greater worker morale, efficiency, and productivity.

A sampling of the trainees shows that 90 per cent. consider the course to have been worthwhile. They cited wage increases, better adjustment to the job, advancement to more interesting work, increased knowledge and skill and greater participation in the war effort as a result of their studies.[1]

Many valuable lessons have been learned as a result of the five years' experiences, says Dr. John W. Studebaker, United States Commissioner of Education. For one thing, the school has developed a pattern of cooperation with the community and with industry. A valuable by-product has been the way in which educators have been willing to readjust their curriculum to meet the needs of the day.[2]

Professor Leo O'Neil points out some institutions have planned programs for vocations before the war, and cited his own insurance courses at the College of Business Administration, Boston University. He, along with Drs. Schell of M.I.T. and White of Northeastern, are receptive to the idea of colleges taking the initiative and cooperating with labor and industry by readjusting curricula for specific plants and encouraging paid employees to be offered courses (training at time and place that suits their needs). So, it may well be that some of

1. Ibid., p. 27.
2. Ibid., p. 27.

the methods employed in war training will carry over into peacetime academic life of post-war New England. (A more lengthy discussion of a proposal for colleges follows in sub-section three.)

2. Training for Labor.

The reactions of trade-union leaders and trade-union members in higher education vary between two extremes. One is the good-humored scepticism which used the term "professor" in mild derision and pokes fun at theories and book knowledge. The other extreme accepts with indiscriminating and often unwarranted respect all that higher education provides without, in most cases, attempting to make any immediate and practical application of such knowledge to union problems. At the level of trade school and technical training, of course, there has been cordial cooperation, both in securing and administering vocational education. In New York State, educators, employers and union leaders agree in setting up apprenticeship systems and in blending liberal arts with vocational training.

However, some labor leaders point out[1] that there is now an awakening in our colleges and universities to their responsibilities in training men and women for administrative work and leadership in the trade unions. Outstanding as a cause of this changed attitude of our colleges to organized labor is the great increase in the numerical strength of the unions during the last decade; also the new legal

1. Starr, Mark, "Cap and Gown Meets Overalls", Guidance, Practical Arts and Vocational Education, January, 1945, p. 47f.

status which the unions enjoy in the community, thanks largely to the Wagner Act. When the unions were literally fighting for their lives, the colleges, with a few notable exceptions, also shared in the animosity expressed against them. Too often the colleges trained the economists, the lawyers, the judges and the business executives who justified and practiced the boycott against the unions, granted injunctions against their activities and developed in the large corporations personnel and welfare work to serve as a backfire against the alleged menace of union organization.

Happily that situation is changing. There is a bridge of mutual assistance being built between the labor unions and the colleges. David Dubinsky, speaking recently, thus welcomed this trend:[1]

> "Labor education is already an impressive factor in the life of many unions today, but its role in post-war years should become even greater and it should receive the whole-hearted cooperation from the liberal educators all over the country who see eye to eye with us in that matter.
>
> "That some of our leading colleges and universities are beginning to think in terms of labor education and opportunities for training labor leadership is a sign of the times. I have in mind the interest of such great institutions as Harvard, Wisconsin and Michigan universities and several others in the Mid-west and on the Coast, in sponsoring trade union schools and courses and fellowship for ambitious and wide-awake labor men and women. It is something the labor movement of tomorrow should learn to take advantage of on an ever increasing scale. A well-informed and intelligent labor leadership is most essential for the future of labor and of our country in general."

1. As quoted by Mark Starr (op. cit., p. 49)

Already some forty to fifty educational institutions have taken steps in this direction.[1] Previously, radical groups had tried to run independent labor colleges.[2] Universities and colleges had offered their premises to house institutes run by unions, by the Workers Education Bureau, and summer schools run by the Southern Summer School and the Office Workers School. The Textile Workers Union has conducted such institutes at the University of North Carolina and of South Carolina. Wayne College and the University of Michigan have provided facilities for the Automobile Workers Union groups. The School for Workers has been an integral part of the University of Wisconsin since 1921. Less than one year ago, the A.F. of L.'s Educational Director noted[3] many evidences of growing interest among educational institutions in working with organized labor, e.g., Indiana University has distributed over 10,000 questionnaires among labor organizations in that state to secure information upon which to base an adequate statewide program of workers education. During the year the director conferred with the authorities of several universities, at their invitations, on continuing programs of labor education. Among these were the Universities of North Carolina, South Carolina, Alabama, New Hampshire, Washington University at St. Louis, Indiana University, Pennsylvania State College, Columbia University and City College of New York.

1. Starr, op. cit., p. 49.
2. Black Mountain and the Rand School and the Hudson School are only three out of many.
3. In the "Report of the Executive Council of the A.F. of L. to the 64th Annual Convention" at New Orleans, La., November 20, 1944, p. 561.

The colleges now plan to conduct their own courses in which, in some cases separately and in some cases jointly, labor and management are provided with special courses in industrial and labor relations. It may be noted, for example, that Connecticut University is setting up a course in Labor-Management Relations. The School of Commerce at the University of Kentucky is providing courses in this subject. New York University continues to provide special courses. More ambitiously, the University of Toledo provides a group of courses in which the student receives "a certificate of labor leadership" and a university credit of 24 hours. Xavier University, Cincinnati, runs a labor school and recruits its students among union members. The University of Minnesota provides a 16-weeks course for trade unionists. In the Far West, the University of California, Santa Clara College and San Diego State College have organized institutes. The University of Virginia runs special projects for labor unions. Rutgers University, as many others, has over a long period, cooperated with the Workers Educational Bureau. Pennsylvania State has used its Extension Division to conduct special courses for shop chairmen and foremen. Yale gave scholarships so that trade-union leaders could participate in a graduate seminar in 1943 and proposes to continue such work after the war. Temple University (Philadelphia) provides courses on Labor Education which include leadership training. In the same city, the Board of Education has set up a program to train shop stewards and other union personnel. Rockhurst College (Kansas City) has currently a special

four-year course which proposes to train young men and demobilized soldiers for business agents and similar work. The University of Illinois and the University of Chicago have made ambitious plans to serve organized labor and business. The University of Michigan has newly appointed a special field worker to assist unions in their educational activity. The National University Extension Association, which links together over 50 of the larger universities, has discussed workers' education in its annual meeting and has a committee to explore and develop the field.[1]

The Harvard Labor Fellowships are now in their third year and have been officially recommended by the American Federation of Labor. These fellowships are financed jointly by the University and the Unions. The men are chosen first by their own unions, without prerequisites - not even a high school diploma. However, the University asks that men be sent who have already proven their ability in trade-union service. The courses include: Economic Analysis, Trade Union Problems and Policies, and Human Problems of Administration. The war has reduced the available student body but the University authorities and the union leaders are satisfied with the advances which have been made.[2]

The A.F. of L. Education Director makes a more sweeping statement in reference to the Harvard program:[3]

1. Starr, op. cit., pp. 49-52.
2. Ibid., p. 50.
3. 1944 Annual Report (A.F. of L.), op. cit., p. 125.

> "In addition to these formal courses, weekly seminars and dinner meetings provided additional opportunities for discussion and for outside speakers. These students with practical experience, the majority of whom have held responsible union positions, have had an influence upon the student body in addition to benefiting by educational opportunities afforded them."

Moreover, the A.F. of L. gave Harvard $5,000 to help in the establishment of the Louis E. Kirstein Professorship. Commented the 1944 Annual Report:

> "A proposal to raise an endowment for a chair to constitute a keystone in a research program in the human problems of administration was presented to the American Federation of Labor with the request that we make a contribution. This field of labor relations is so important to us that research under such auspices should benefit the entire movement. The Executive Council authorized a contribution."

Another plan in formation is the New York State School of Industrial and Labor Relations to be started at Cornell University in 1945. This has received wide attention in the press. The U.S. Department of Labor's Labor Information Bulletin, August, 1944, described the establishing of this school as "the most important enactment in the industrial relations field," and gave the statement page one prominence.

In commenting upon the school, the Committee on Education of the New York State Federation of Labor said in its Convention, August, 1944:

> "The report of the New York State Joint Leislative Committee recommended the setting up of

a school of industrial labor relations and $10,000 * was recently voted to establish such a school at Cornell University. While favoring the extension of educational activity into this important field and welcoming the representative given labor in the eight-man board of control, your Committee makes the following suggestion:

"1. That the labor representative should play an active part in determining the curriculum, the methods and the appointment of teachers in the proposed school and not merely serve in an advisory capacity to certify plans already made.

"2. That the college should endeavor to set up extension activities in the big industrial cities to make its work more effective and far reaching...

"3. That the committee, setting up the school, should take pains to consult with the trade-union organizations which have already carried through plans for in-service training and refresher courses for their officers and members. It should also cooperated with the Workers Education Bureau and other groups which have conducted classes, institutes and summer schools for trade union members. Such a program of adult education should play an important part in the solution of post-war industrial problems.

"Your Committee urges all unions, affiliated with the New York State Federation of Labor, to study their own educational needs, to initiate training plans and to be prepared to cooperate with all genuine efforts made by the new School of Industrial and Labor Relations and all other colleges and institutions to create educational facilities for union members, subject to the conditions your Committee has suggested."

In large part these suggestions have already been adopted in the official plans for the projected activities of the School which will open in the fall of 1945.

* This appropriation was raised to $200,000. (Source: Kathryn Lewis, "A Letter from the Secretary Treasurer", UMW - District 50 News, Vol. 4, No. 19, Washington, D.C., July 1, 1945, p. 2.)

It is estimated that there are at least 100,000 union leaders in the Unted States.[1] The staff of the trade unions now includes a large clerical staff in its national and local offices; some 50 to 60 research workers and two or three industrial engineers who usually operate from the national headquarters; editors, journalists and writers; an increasing number of education teachers, directors and counselors who are responsible for a large amount of educational, recreational and social welfare activity. In the main, the schools organized so far aim at the leaders who are responsible for negotiation and policy formation. In many cases these are only potential leaders because, unfortunately, the responsibilities of administrative duties prevent the actual top leaders from abandoning their work and taking college courses. However, there is no reason why there should not be refresher courses and in-service training even for such leaders, if the colleges are able to prove that they have useful skills and can help the union leaders. Incidentally, some of the unions are establishing close relationships with the technical schools in the universities. For example, the International Brotherhood of Electrical Workers has made an arrangement with Marquette University under which a number of its members can study the latest developments in electronics, return and transmit the information to their members in the locals. A press release describes the school thusly:[2]

1. Starr, op. cit. p. 52.
2. Boston Traveler, November 13, 1944, p. 4.

> "The school, established under arraggements made by the International Brotherhood of Electrical Workers Union (AFL) and Marquette University, is the first of its kind in labor and industrial history.
>
> "The attending electricians will be given six weeks' courses with classes run eight hours a day, five days a week. Intensive classroom and laboratory studies make up the day's program.
>
> "The worker-students are paid while attending classes. Their union foots the wage bill and in addition bears tuition and other school costs and traveling expenses. The only cost for students is room and board.
>
> "Three large companies in the electric field - General Electric, Westinghouse and Allis-Chalmers - have assigned experts from their staffs to assist Marquette faculty in handling the classes."

Undoubtedly, if labor-management cooperation develops, there will be similar instances of this sort.

3. A Proposal

New England colleges have an opportunity that they never have had before. Those institutions which are willing to adjust to purposeful education can provide both labor and management a needed service and be well paid in dollars and prestige.

The war training programs have shown industry and colleges that training by educational institutions can be productive enough to warrant its continuance. Cooperative training schemes initiated by colleges for labor union members have worked well. Labor has not been especially articulate as to its specific needs, but college liaison men could easily determine them. Whether labor and management should study problems together depends upon the faith each has in the other, the goodwill built over time, and the present relations in the particular plant.

The industrialized (and unionized) states in New England might well anticipate a need for training and retraining as shall be shown later. New England colleges either individually or cooperatively have the resources in terms of personnel and equipment to serve as training consultants to New England labor and management. No one can accurately predict at this time the role of New England colleges in employee training in the post-war.

We can point out here and throughout the need for such a service is even more apparent now that the Government is removing its subsidy to College-training-for-industry. Some educators have been considering the problem and are anxious to become a service unit for New England industry (M.I.T. has made plans and contacts). If formal programs are to be amended to fit the needs of particular plants, pressure must be brought to bear on education-policy-makers. This pressure perhaps never will be organized because individual consultants will attempt to fill labor's and management's needs. At present an opportunity merely exists, but it presents a challenge to educators to modify their philosophy of education. Educators (i.e. New England College Heads) must have the ingenuity and ambition to seize the opportunity by showing initiative and bringing the "mountain to Mohammed" (i.e., contacting, surveying, planning, coordinating, accomplishing training programs in cooperation with labor and management representatives in individual plants).

In a word, some New England Colleges, by functioning as a

service to the community (and this applies to the distributive trades as well as the manufacturing ones), can provide training for employees (WLB defines employees as all who are paid wages or salaries) and thus make a college a real, living institution contributing directly to the health (safety) and welfare (in terms of higher pay for greater productivity) of its fellow citizens.

B. Check Points

The Association of Consulting Management Engineers has prepared a check list for the Committee for Economic Development. One of the six steps these consultants would take in planning a post-war set-up for a plant employing 50 or more persons is to prepare suitable training. When the number of employees has been determined, and their work and responsibilities defined, it is advisable to review all employee training programs to see whether these are adequate.

No employer should overlook the fact that millions of men and women coming out of the armed forces will have experienced the most intensive and purposeful training ever devised. Modern military training shows the recruit the whole picture, tells him the reason why and is geared to two purposes, beating the enemy and self-preservation.[1]

Future industrial training must likewise be purposeful, and must show the employee how he can get more out of the enterprise for himself by helping other employees and the company to get more. All

1. The quarrel with military training is over the mechanics; i.e., the lack of follow-through on almost-perfect programs. Criticism of military teaching is justified!

employee training programs should be reviewed, the following being some of the important points to be considered:[1]

"(a) Factory employees.

1. Have adequate programs for retraining factory employees been worked out?
   (a) Will these programs retrain employees for their new jobs quickly and efficiently?
   (b) Have steps been taken to see that instructors are properly trained? Do these instructors command the respect of their audiences?
2. Do employees thoroughly understand the reason for training programs?
   (a) Are these programs interesting?
   (b) Do the students show a desire to learn more?
   (c) Do they feel that these programs are intended to help them earn more?

(b) Supervisory, engineering, sales and office employees.

1. Have programs been devised for the instruction of employees in foremanship, for superintendents, etc?
2. What steps are taken to extend the education of engineers, to keep them up-to-date with advances in technical knowledge?
3. What sales training methods are in use for your sales force?
   (a) have plans been made to inform salesmen of changes in market requirements, new products, changing requirements of customers, etc?
4. Have plans been made for proper training of clerical, stenographic and other office employees?

(c) Management personnel.

Many companies make a practice of calling together the top management of the company to regular sessions at which the objectives and the methods of running the company are discussed.

1. Handbook No. 1, "Planning the Future of Your Business", Association of Consulting Management Engineers for C.E.D., New York, January 1945, p. 14.

> While such sessions may well be devoted largely to the day by day problems of running the company, provision should be made for objective discussions of long range policies, plans and procedures designed to bring about more efficient operation, lower costs, greater sales and bigger profits."

Admittedly, the considerations above are quite general, but a realization of the usefulness of such a list is apparent when compared with the useless platitudes of the Massachusetts Committee on Post-war Readjustment; for example, "plan now...make a check list of all affected by planning...including...personnel."[1] If such general phrases constitute planning, how small our training problems must be!

The program of the Connecticut Post-War Planning Board illustrates a contrasting situation to that in Massachusetts. The constituency of both post-war committees is similar (in that people from similar walks of life serve), but the results are amazingly different. One illustration will be given below.[2]

Whether consciously or unconsciously, whether formally or informally, and whether well or poorly administered, and no matter what it may be called, every company has always had some sort of training for its employees; and if there is one common denominator that has been agreed on by those who have been comparing notes, it is that plans must be individual for each company.

1. "Business Planning Now for V Day", Committee for Postwar Readjustment, Boston, Mass., March 19, 1943, pp. 1-25.
2. See two pages later.

It is, therefore, not the purpose of this paper to provide any formula - or even to suggest the details of what the training policy or methods of any individual company should be. But the cross section of experience compiled herein may serve as a table of reminders for consideration in developing or revising training plans.

The International Ladies Garment Workers' Union is famous for leadership in field of workers' education and so it may be helpful to know what it anticipates:[1]

> "While the future cannot be clearly mapped owing to the uncertainty about when and how the World War will end,[2] the following tasks and lines of development seem clear:
>
> 1. Greater utilization of institutions of higher learning for trade union training under appropriate safeguards on the lines of the Harvard experiment.
> 2. Closer cooperation with shop chairmen and business agents to ascertain the needs of our members and so better to recruit them for study groups and activities; to carry ideas into the shops and homes by pictorial leaflets; and to increase refresher courses for our officers and classes for new members. The work of the Officers' Qualifications Courses should be extended to new areas.
> 3. Improved training for our teachers and educational directors by special institutes with better organized progressing courses for our advanced students.
> 4. More varied supply of visual aids, movies, filmstrips, pamphlets and books, and a better check on their use.
> 5. An extension of our aim to world vistas and

1. "Annual Report" ILGWU, New York, May 31, 1944, p. 17.
2. In October 1945, the ILGWU had made no statement of post-war plans.

> international organization, starting from our shop and local community and widening out to secure international cooperation and understanding to overcome the repercussions of the war and its intensification of our social problems.
>
> "The educational activity of the ILGWU will thus be ready to keep step with progress in the future as in the past."

Certain types of training, such as apprentice training, can be planned even if there are no prospects at present. In Massachusetts, even though it is a highly industrialized state, in 1945 there are only thirty-five (35) indentured apprentices.[1]

In spite of the Massachusetts Post War Committee's statement that "there will be a huge supply of trained labor",[2] it will be necessary to establish broader training programs than have usually been offered. Development of new industries and new products as a result of war production will create demand for workers in fields where little or no training has hitherto been done. At this point the work of planning organizations, both national and local, comes into sharp focus. It is probable, however, that the facilities and experience of the vocational educational departments will be most valuable, even in training for these new developments.

The Connecticut Post-War Planning Board points out that:[3]

> "Actually we face an acute shortage of highly skilled labor during the next few years. The fact

1. Figure from Robert Nolan of Mass. Dept. of Education when interviewed by author in April, 1945.
2. Mass. Committee, op. cit., p. 11.
3. Interim Report, op. cit., p. 103.

> that it takes several years to train a competent mechanic, coupled with the fact that industry faces a tooling job exceeding in scope and variety the problem of conversion to war production, makes this inevitable. Apprenticeship, the only thoroughly tested, economical, and practical method for developing the essential skills, is a present, as well as a future must."

Apprenticeship training should be brought down to the community level. The State apprenticeship councils should promote community councils embracing representatives of local manufacturers, local unions, the local office of the United States Employment Service, local school authorities, and the representatives of the Apprentice Training Service.

Within the framework of the Federal Committee on Apprenticeship, use should be made of existing Federal and State agencies presently concerned with this problem. To this end, effective cooperation should be established between veteran agencies, the United States Employment Service, the United States Office of Education, and the apprentice training school on a national level so that a uniform and nation-wide approach to the problem may be made.

Past experience has shown that apprenticeship must operate under definite standards with adequate safeguards as to training, experiences, and wage rates if abuses are to be eliminated. The apprentice agreement setting forth in detail what the training program shall consist of should be required and, wherever possible, joint management-labor supervision of the program should be encouraged. In fact, returned soldiers should be referred only to companies which have had their training programs approved by authorized reviewing agencies,

which in turn would be governed by basic minimum national standards.

For a great number of the youth and for the greatest number of the adults it will be necessary to establish a different program. Trade schools offering training of 4,000 hours or so, and apprenticeships of 8,000 hours will not supply the demand for the millions of skilled and semi-skilled workers required for our multiplicity of agricultural, industrial, and technical service, and for business enterprises. To meet this need it will be necessary to establish facilities for short, intensive, direct, but adequate technical training.

During World War I this field of training received its initial impetus, but in a very small way (60,000). The huge industrial expansion and conversion of World War II, however, has caused the birth of several excellent and worth while intensive training plans. From the experience of these agencies should be drawn the plans for retraining and pretraining the postwar workers. The experiences of the armed forces have in some instances amazed the established educational authorities. From them also much can be learned.[1]

Although it is recognized that these emergency plans for intensive training must be approached with a critical attitude, it is nonetheless true that considerable good can be accomplished by this type of training.[2]

1. "Time", July 2, 1945, pp. 49-53.
2. For more information see chapters 1,2,3,4.

It would be easier to fix the probable status of employee training in post-war New England industry, if there were a study made of the outlook for industries and occupations.[1] No research body or planning group has completed such a study. Only two studies remotely related to post-war training because of war change have found their way to the Monthly Labor Review. One article notes a civilian net out-migration from Maine of 19,033, from New Hampshire of 11,995, from Vermont of 31,407, and a net in-migration to Massachusetts of 37,032, to Rhode Island of 29,478, and to Connecticut of 127,422.[2] The conclusions of this study were too general to be considered in setting up a check-sheet for post-war training. The importance of these figures in case of sudden demobilization has been verified with the advent of Victory.

The other study[3] emphasized the importance of 166 establishments in Massachusetts constituting less than 0.3 of 1% of all firms, but employing more than one-third of all the workers. These 166 firms have experienced the biggest increase in employment (accounting for 65,000 or 90% of the total increase in transportation-equipment, for example). This study would indicate that unless these

1. Even the New England Council has only "thought about" employee training.
2. Conant, B., "State Variations in War Migration and Post-War Demobilization", Monthly Labor Review, Washington, D.C., September, 1944, pp. 481-495.
3. Fine, Verna R., "Employment Changes in Massachusetts in Relation to the Post-War Situation", Monthly Labor Review, Washington, D.C., October, 1944, pp. 740-746.

166 firms readjust gradually the impact of war contract cancellations would disrupt the whole economy of Massachusetts.[1] The important point is the element of timing of the changes in employment. The major industries have been affected differently by pre-war and war conditions, depending on their importance to military demands; each industry, too, will be affected differently by post-war conditions. The adjustment period is not a definite one affecting all industries simultaneously, nor is it a period that is still in the future, to arrive only when all the boys get home. The adjustment period is here now; its effects on industry will continue, irregularly spaced, well into the post-war period. However, since all but two of the major industries have already made downward adjustments, the full impact of reduction is being spread out. The retraining problem is correspondingly lessened because of the advantage time gives.

Training planners will actually plan for all types of training, so a listing of considerations of a state vocational administrator will give the plant training man an insight to what might be available to him. (Previously, future trends in workers' education from a union point of view were cited as a similar aid for coordinating the activities of an extensive training program.) A state vocational administrator perhaps would consider these several questions.

To what extent can the collaboration between industry and the schools, which so successfully characterized the War Production

1. The relatively small number of unemployed in Massachusetts in September, 1945, seems due to little literal reconversion (i.e., change of physical plant and equipment).

Training Program, be utilized in retraining, refresher, and apprentice programs? To what extent can skilled workmen, foremen, and other plant personnel be used as teachers? How can the occupational needs of particular crafts and industries be forecast? Will a careful survey of probable occupational shifts from heavy industry to consumer goods be desirable? How can the training program parallel this conversion? How can training on the job best be combined with theoretical or technical training?[1]

C. Trends in Training

Throughout this paper is sufficient data to answer the question "Why train?" Simply it may be stated employers cannot afford not to train. Training is the means for producing the result of a highly productive employee whose quality and quantity of work pays in a very short time for the cost of his training. In saving of time because of accident prevention, the saving on labor turnover because of well adjusted, productive employees, and the savings due to pleasant employee relations, are reasons to motivate even conservative New Englanders to train employees.

The day has passed when we thought of capital and labor as abstract ideas. The day may come in our times when we shall talk less of management and labor as abstract groups. Even now we know they are

1. Similar considerations listed in "A Program for the Education of Returning Veterans", National Education Association, Washington, D.C., 1945, p. 17.

1. Similar considerations listed in "A Program for the Education of Returning Veterans", National Education Association, Washington, D.C., 1946, p. 17.

both just people - people, incidentally, with many more potential points of common interest than points of conflict. Perhaps we are realizing that the natures and attitudes and abilities of the people we know as "employees" can, and do, make or break the people we class as "employers" - and vice versa.

The very essence of the democracy which we Americans cherish is the conviction that all these individual people are important; and that, given Government and business leaders in whom they have confidence, John and Jane Average are able to discharge the responsibilities that go along with the privileges of freedom, and with the requirements of their jobs.

The tendency of employers to give more and more conscious attention to the selection and training of the people who make up their organizations is a vital part of the growing recognition of the human responsibilities of business leadership in a democracy - and it does not make this social trend any less helpful to the public interest to know that it also seems to have great promise from a strictly-business point of view.

A great amount of attention has been directed to the probable role of training services available through various Government resources in the post-war. A suggestion has been made to New England Colleges to carpe diem and perform an industrial-community service as a training resource. Both discussions, from an employer's point of view, serve to underline possibilities. Many other guide posts (such as the

thinking of so-called Post-War Planning Committees) can help an employer in determining a training policy. This project is not geared for a specific plant or industry; hence it has limited value in helping to establish a specific training program.

Most post-war plans talk in terms of V-J Day as the Army talked of M-Day back in 1939. Our economy is so complex that overnight changes are impossible. Training plans must be flexible - but there must be plans if there are to be jobs. An employer is interested primarily in his own unit, and so this paper would not be complete without summarizing a few trends that need to be thought about by men planning post-war training programs. Since Dr. Hutt has observed[1] trained employees may make the difference between success and failure in the competitive post-war, it will pay employers to consider these trends in training if they are to attract and keep a high type of employee who, when trained, will enable them to survive.

The Committee for Economic Development has recently made note of the usefulness of training in the period after V-J Day. One statement is that: "The several training programs for war workers will continue to be useful in the reconversion period."[2] Charles Meyers has restated a reminder to personnel policy makers:

> "While not part of the hiring process, proper training is important in attracting and keeping new workers. Those who have been inadequately

1. See p. 47f. - letter to author March 1945.
2. A Statement of National Policy by the Research Committee of the CED. - "Post-war Employment and the Removal of Wartime Controls", New York, 1945, p. 23.

trained not only are poor producers but often become dissatisfied and quit."[1]

The following paragraphs summarize six trends of a different nature than has been discussed above. These six points are not to be considered a summary of all trends since they are merely additional considerations.

1. Better Selection

Employers and employees, alike, are apt to have more respect for aptitude tests and various other controls for assuring efficient selection and assignment. This respect may be due to several real reasons - because of the work that has been done in the universities and in industrial personnel departments during the past twenty-five years; because of their wide-spread use in the relations between the U.S. Employment Service and employers; and, finally, because so many millions of young men will have been assigned to square or round holes by the classifications methods of the Army and Navy.

It will be a long time before any of these can be accepted as a full substitute for judgment; but employers may well make more active use of them as accredited supplements to raw judgment.

Obviously, the training problems are lessened as "better" personnel is selected. The weighted application blank and the standardized interview weed out obvious misfits. Considering the expense of hiring, indoctrinating, and training, every step forward in

1. Meyers, Charles A. "Personnel Problems of the Post-War Transition Period," C.E.D., New York, 1945, p. 40.

reducing turnover of personnel contributes to the efficiency of the individual employer.

The use of personnel controls to help select employees for upgrade training has much to offer. Naturally, the development of higher grade employees is, at least, as important as the training of new ones.

2. More and Better Training

On the whole, the future will see more evidence of respect for the general idea of training, and a more scientific approach to questions of technique and management of training programs.

Notable progress has already been made during the past twenty years; and the present heavy emphasis on training in both military life and in the production departments of industry is being watched closely by employers.

A much neglected phase of training has been in upgrading. The Bureau of Labor Statistics words it thusly (with respect to new plants):

> "A systematic upgrading procedure is an important step in meeting requirements for experienced workmen. Success in building up working staffs for new plants or for plant expansions will depend largely on the capacity of upgrading methods for developing supervisors and skilled employees. Although the procedures regularly employed at most facilities may be generally satisfactory, the large scale and accelerated rate at which upgrading must take place will usually require some modifications. These will include a more careful search for ability and skills among workmen, a review

> of the standards for upgrading to higher jobs, improved rating methods, more effective means of acquainting employees with opportunities for promotion, and supplementary training programs."[1]

3. More Specific Measurement

Employers have long known certain methods of training have worked - but few know how much, or how well, they work. The May 1945 issue of "Personnel" carries a warning to post-war training directors that they must prove the training warrants the cost.

The difficulty of measuring the worth of some types of training is apparent. For example, a hint to the value of a foremanship course in employee relations might be reflected, in part, in maintaining a schedule, in absentee statistics, in personnel turnover, in grievance cases, etc.

One recent step forward is a system for evaluating apprentices, devised by O.L. Harvey. Mr. Harvey is aware that faced with the necessity of proving the value of their work to top management, training specialists often find themselves forced to depend on guesswork and implication, and so are unable to adduce convincing evidence in support of their claims. His article constitutes an attempt to develop an accounting technique for apprentice training, and to reduce the various items involved to a dollars-and-cents basis. While Mr. Harvey cautions that his listing is a tentative one, his paper should point

1. U.S. Department of Labor, Bureau of Labor Statistics, "Improvement of Labor Utilization Procedures," Bulletin No. 807, Washington, D.C., February, 1945, pp. 18-20.

the way toward a more factual consideration of personnel costs.[1]

The ideas presented in Mr. Harvey's article represent merely a theoretical consideration of methods of measuring the costs of training apprentices and the value of the apprentice as a productive agent. As a first approximation, the consideration is limited to broad concepts, and therefore fails to show exactly how each item is to be measured. Its primary purpose, however, is to suggest possible items for measurement and a way of balancing costs against returns. If a standardized method of accounting could be worked out and widely adopted, the answer to the question "what does it cost to train an apprentice?" and "is he worth the money spent in training him?" would be available. Since Mr. Harvey's study is the only one published, his hypothethetical apprentice-training profit and loss statement is included in Appendix A.

In Summary, training can best be evaluated on the basis of extra results. These extra results can usually be best measured by comparisons with previous results obtained by the same men, as well as results being secured by other men on comparable items and under similar conditions.

At any rate, training objectives need to be set up with specific goals of accomplishment.

To say that the objective is to "train employees" means

1. Harvey, O.L., "Evaluating Apprentices", Personnel, American Management Association, New York, January, 1944, pp. 49-55.

little. But to say that, "through training, our objective is to increase production per man ten per cent. within a year's time," is a goal on which sights can be set, so that at the end of the year the management at least knows how far short the training effort has fallen, or how far beyond the objective training has carried.

4. Changes in Emphasis

Two of the most obvious changes in emphasis in the technique of training will probably be in the increased use and effectiveness of (a) visual methods and (b) the conference-discussion for groups. Both of these techniques have a place in supervisory training.

Some companies feel that their chief difficulties with training have arisen from not giving enough attention to the fact that supervisors, too, need to be trained.

The Bureau of Labor Statistics has this comment to make on Supervisory training:[1]

> "The training of supervisors is probably neglected most, since the effects of inadequate training are often not directly perceptible in plant operation. Actually, poor supervision has many serious and pervasive consequences, ranging from employee dissatisfaction (with its resultant excessive turnover) to production deficiencies. At the present time, when supervisory work carries additional heavy responsibilities for new processes, new products, and the training of other workers, the adequate preparation of leadmen, foremen, and superintendents is especially necessary."

The supervisor should be kept reminded that no amount of training can provide a substitute for hard work - but that "good form" can make hard work more productive.

1. B.L.S., Bulletin No. 807, op. cit., pp. 19-20.

Careful organization and handling are necessary, if either of the two generally recognized types of group training is to produce useful results:

(a) The "meeting" where the speaker, or speakers, present one or more subjects to a group, usually a large group.

(b) The "conference" where the leader guides a discussion involving all members of a smaller group.

A typical situation is cited by a training manager in a C.E.D. publication:[1]

> "One of the mistakes our training division has made has been permitting ourselves too much of tendency to gather data for training programs independently; and turn it over to the line organization as a completed training package.
>
> "Too often, however, we have done this in such a way that the person from whom the facts were secured felt no personal responsibility for the success of the completed program."

The main weakness with the "meeting" lies in the fact that most meetings have been looked upon solely as a medium of "instruction". They do not provide enough of an opportunity for discussion and decision. That is, they have too often been held for the purpose of stuffing men's brains with predetermined information - trying to funnel ideas into their minds.

Because so few people like the idea of being "taught", the subject matter of a "meeting"must be extremely good and extremely

1. "Selecting and Training Post-War Sales Personnel," No. 2, C.E.D. New York 1945, p. 25.

clear, if any considerable percentage of the men can be expected to carry anything away that they will put to work.

Growing numbers of supervisors are finding a remedy in holding the "discussion" type of meeting - i.e., the "conference". In this the chairman doesn't give forth with his own ready-made opinions and front-office decisions, but leads the group members to build up the plan for themselves - and to commit themselves to act accordingly.

Of course, this doesn't mean that the group leader goes into the conference without any ideas. He must, in fact, be better prepared than ever.

The difference is that he does as little talking as possible - and confines most of what he does say to questions that will lead in the direction of agreement on a sound plan and a definite decision.

During the war hundreds of thousands of group leaders - foremen in war factories and officers in the Army and Navy - received intensive training in this important department of leadership.

(Because the conference method will be useful in all types of training beyond job-operations-training, the reader may want to examine Appendix B. Appendix B contains the minutes of a series of foremanship training conferences which were planned and conducted by the author at Hamilton Standard Propellers, a division of United Aircraft, at East Hartford, Connecticut, in 1944. Included in the series are minutes of conferences conducted by leaders trained by the author. We may note the same general result is obtained by competent group

leaders. The subject matter covered was typical of such a series and satisfied needs of the plant. Some of the participants in the conferences, in this particular instance, because of their inexperience, would have benefited more from a meeting-type instruction - with guest speakers, such as the Labor Relations Manager, Sales Manager, Production Chief, Chief Engineer, Chief Job Evaluator, etc.)

5. Better Compensation Plans

There are, of course, a thousand ways to keep employees on their toes. Compensation is a subject by itself, but the point here is that it is an essential complement to training.

The most obvious objective in the training of people - all the way up and down the line - is to improve on the old "laws of averages" by improving the kind of work they do, as well as increasing the amount. It would be shortsighted, however, to think solely in terms of increased ability.

The National Society of Sales Training Executives senses that:[1]

> "There is a growing tendency to recognize that it is not enough to think solely of the influence the quantity and quality of the employee's work has in determining the size of his pay check."

The method by which he is paid needs to be planned the other way around. That is, it needs to have in it qualities which: first attract the kind of man the management wants; and, second,

1. "Selecting and Training Post-War Sales Personnel", op. cit., no. 2, p. 15.

encourage him to exert the largest quantity of his best quality of effort.

Like the selection of employees, the subject of compensation is so spacious that it would be confusing even to attempt to examine the details. It must be apparent that the method of compensation is the most obvious place to bear down hard on the incentive and motivation elements of training.

6. Trainers

Perhaps the trend in the use of trainers within plants is expressed by the answer to "Who will do the training?"

The answer to such a question will vary with the size and nature of a business. This paper has established a truism that employees must be systematically trained if they are to do their jobs well. No matter how carefully men have been selected, or how much aptitude they may have for their jobs, systematic training is essential if they are to reach a satisfactory level of job performance. Foremerly it was standard practice to have training done by the foreman or supervisor in charge of the work. Inexperienced men were sent to the supervisor (or hired by him) and it was his job to see that the new men were given the necessary training. But just as modern scientific management has found that experts should supplement the work of the foreman in making job analyses and setting rates, so also management is finding that the use of experts in training is advantageous as a

encourage him to exert the largest quantity of his best quality of effort.

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supplement to the work of the foreman.[1] This does not mean that training specialists need necessarily do the training. Frequently, in trying to tell how-to-do-it, such specialists are apt to use language and situations that are foreign to the experience of the employees, and the resulting danger is the points do not get across and even the most valuable idea may not gain respect because its presentation does not ring true.

Rather, the function of training specialists might be to set up the machinery for the training to be done by properly qualified persons, to supervise the construction or writing of necessary manuals or other materials, and to keep in close touch with the accomplishment of the trainees during the instructional period. One of the greatest advantages of having a regular supervisor do the training is that the employee thus is more apt to consider it a part of his daily work.

The use of training specialists has the implication that top management is backing the program and thus impetus is lent to it. Direction of training should at least be made a specific responsibility and at the highest practicable level of authority. It is not so much a matter of title as it is the specific assignment of responsibility - for only then can the necessary follow-through on the essential details be assured.

The success of any training effort is dependent upon making

1. Tiffin, Joseph, "Industrial Psychology", Prentice-Hall, Inc., New York, 1944, p. 185.

it continuous, and it should be company policy to make it so. As the head of one of the best-trained life insurance sales organizations puts it,

> "It can be taken for granted that, to be genuinely effective, the training offered salesmen must be practical, interesting anc clearly presented. The department in charge of training will need all the brains and equipment that can be provided; but, no matter how sound it is, the whole thing will fall down, unless thoroughness, patience and follow-through are emphasized from first to last, and from top to bottom."[1]

The case for continuous training was summed up in a "pep talk" by Oliver Cromwell, back in the 1600's. "When you stop being better," he said, "you stop being good."[2]

Trainers, in addition to assuring the continuity of a training program, can coordinate programs and build each program around the men for whom it is designed rather than trying to build the men around the program. It should be their job to assure the worth of their plans by interviewing employees and supervisors about specific needs.

This final section has been devoted to trends in employee training. It might more properly be labeled additional or supplementary trends since the whole thesis is in a sense a study of trends.

Certainly, the participation by the Government in the training of industrial employees has been an examination of a phenomenon

1. "Selecting and Training Post-War Sales Personnel", op. cit., no. 3, p. 13.
2. Ibid., p. 9.

1. "Selecting and Training Post-War Sales Personnel", op. cit., no. 3, p. 13.
2. Ibid., p. 9.

while asking the question: "Is this a trend?" In trying to anticipate the post-war role of employee training services available through Government services, we have seen trends of thinking in expressions by individuals and groups. In a discussion of colleges and employee training we may have pointed to another trend. So too has the remainder of Part III been devoted to tracing and suggesting trends.

While the author would like to be able to say (to labor and management leaders and educators) "This is it!", he can in fact only say this paper reveals some of the more important considerations of trends which will influence employee training in post-war industry.

APPENDIX A

Hypothetical Apprentice-Training Profit and Loss Statement

developed by L. O. Harvey and published in

"Personnel", January 1944

Hypothetical Apprentice-Training Profit and Loss Statement*

DEBIT ITEMS

1. Total wages paid to all apprentices employed during year		$44,852
2. Bonuses placed to apprentice account during calendar year		2,711
a. Piecework and job bonuses (included in item 1 above)	Nil	
b. Adjusted compensation bonus paid April 3 to all employees; proportional amount to apprentices	$436	
c. Bonus amounts accumulated on books to be paid to apprentices on completion of apprenticeship period:		
(1) 20 have completed 1st year, thus credited with $25 each	500	
(2) 23 have completed 2nd year, thus credited with an extra $25 each	575	
(3) 12 have completed 3rd year, thus credited with an extra $50 each	600	
(4) 12 have graduated, thus credited with an extra $50 each (and paid total amount in full)	600	
3. Salaries for management and professional services		9,600
a. Apprentice supervisor	$4,000	
b. Assistant supervisor	3,000	
c. School instructor (part-time)	1,800	
d. All management salaries combined (prorated as 0.5% for services on apprenticeship)	800	
4. Other wages and salaries		2,730
a. Clerical (estimated as equal to 2 clerks)	2,000	
b. Janitorial (estimated as equal to 6 hours per day at 30 cents an hour)	500	
c. Medical (prorated at 1/100 time)	80	
d. Dispensary (prorated at 1/100 cost)	150	

*To determine theoretical number of apprentices who worked a full apprentice-year during the calendar year under consideration, divide total hours worked by all apprentices for any length of time during the calendar year by the number of hours contained in an apprentice-year as defined and prescribed in the published or accepted conditions of employment for apprentices. In this illustration the respective totals are assumed to be 86,188 working hours and 1,750 hours per apprentice-year, yielding theoretically a total employment of 49.25 apprentices per calendar year.

5. Utilities (prorated at 1/100 of total for plant)...		1,986
a. Rent.....	$1,500	
b. Light.....	86	
c. Heat.....	172	
d. Power.....	195	
e. Water.....	33	
6. Plant maintenance and repair (prorated as 1/100 of total for plant).....		500
7. Machinery and handtools for apprentice training....		312
a. Total initial value of all machinery in departments in which apprentices are employed.....	$2,500,000	
b. Estimated total life of this machinery.....	560 yrs.	
c. Ratio of apprentices to all workers in these departments during year under consideration.....	1/40	
d. ac/b.....	$112	
e. Handtools supplied (less repayments made by apprentices.....	200	
8. Stock materials which apprentices worked on as part of their training (includes spoilage but excludes scrap used for training purposes).....		20,000
9. Various other charges (each prorated as 1/100 of total for plant).....		31,630
a. Amortization.....	$ 1,500	
b. Plant insurance.....	10,000	
c. Unemployment insurance.....	8.000	
d. Taxes.....	2,000	
e. Depreciation.....	10,000	
f. Miscellaneous items.....	130	
10. Other services and materials.....		400
Total cost of training 49.25 apprentices....		$114,721
Average cost of training per apprentice per year.....		$ 2,322

CREDIT ITEMS

1. Cost price of acceptable pieces produced by apprentices.....		53,748
a. Piecework hours worked by apprentices..	77,496	
b. Estimated average hourly rate paid apprentices on piecework.....	50 cts.	
c. a x b.....	$38,748	
d. Cost of stock used in this work.....	15,000	
2. Value of other services on group jobs.....		11,750
a. Cost price of all group work done....	$373,000	
b. Total hours of group work done by all workers on these jobs.....	180,709	

c. Total hours of group work done by apprentices on these jobs.....	5,692	
d. ac/b.....		
3. Cost difference between work done by apprentices at apprentice rates and same work if done at journeyman rates.....		26,065
a. Total hours worked by apprentices on productive work.....	83,188	
b. Journeyman rate.....	$1.25	
c. Estimated average hourly apprentice rate.....	52 cts.	
d. 2/3 ab-ac.....		
4. Profit on apprentice labor charges (estimated as being equal to 1/3 of total wages paid to apprentices).....		14,950
5. Assessed value of equipment reclaimed by apprentices (prorated over estimated life of equipment involved).....		20
a. Estimated value of all machinery reclaimed by apprentices (regardless of where used), computed as of date each separate reclamation is completed.....	$32,600	
b. Estimated total life of this machinery.....	40 yrs.	
c. Ratio of apprentices to all workers in departments in which apprentices are employed during year under construction.....	1/40	
d. ac/b.....		
6. Costs borne by apprentices, to relief of employer....		250
7. Value of inventions by apprentices (estimated and prorated over a 10-year period).....		5,000
a. Estimated value of inventions by apprentices.....	$50,000	
8. Any other values not included above.....		Nil
a. Apprentice bonus refunds.....	Nil	
9. Potential value of apprentices as future employees		23,627
a. Total graduates past 10 years.....	520	
b. Number of (a) who have had 5 years or more of employment with company....	110	
c. Sum of items (1) through (8) above..	$111,783	
d. bc/a.....		
Total productive value of 49.25 apprentices.....		$135,410
Average productive value per apprentice per year.....		$ 2,749
Less average cost of training per apprentice per year.....		$ 2,322
Average profit per apprentice per year		$ 427

APPENDIX B

Minutes of 20 Foremanship
Discussion - Conferences

prepared by author at

Hamilton Standard Propellers
East Hartford, Connecticut

1944

MINUTES

Group G — FOREMANSHIP DISCUSSION — Meeting No. 1

February 23, 1944

The first meeting was opened at 5:00 P.M. with the following attendance:

PRESENT		PRESENT FROM OTHER GROUPS	ABSENT	
J. Cole, Jr.	H. Nestor	C. Chapin	L. Gaudet	
W. Curtis	J. Pangonis	A. Heimgartner	D. Height	(day off)
A. Jones	W. Peterson	C. Keefer	D. Moran	(day off)
J. Larner	P. Prisk	J. Kozak	E. Sullivan	(day off)
A. Lavigne	C. Rollins			
R. Lighton	J. Ronskavitz			
A. Mailloux	O. Skidgell			
D. Mercer	G. Williams			
W. Nelson				

Group Leader: J. R. McPherson
Group Secretary: D. Mercer

Mr. P. A. Azinger opened the meeting by stating that the need for foremanship training is more acute now than ever at Hamilton. As evidence of this fact he pointed out that everyone, whose job is of a supervisory nature, from the General Manager down, is enrolled in a group for training in foremanship problems.

Mr. Azinger emphasized that the company feels these conferences are so worth while that it is willing to sacrifice one hour of production time each week. Each member was congratulated on the opportunity and priviledge of attending these conferences. Mr. Azinger concluded by stressing the necessity and importance of prompt and regular attendance. Then he introduced the Discussion Leader to the group.

TOPIC: IT'S OUR JOB

INTRODUCTION

This is the first conference of Hamilton Standard Propellers 1944 Foremanship Discussions Series.

Many of you have participated in this type of conference in the past; many others, however, are present at one of these discussions for the first time. Those of you who have taken part in these discussions before will remember that the term "Foreman", as we use it, refers to any individual who is responsible for getting work done by other people, whether his official title be Foreman, Superintendent, Supervisor, Set-up Man, or Group Leader. Every man who is responsible for the production of others is a Foreman. He must plan and schedule work, oversee the carrying out of that plan and schedule by other people, and give the necessary instructions to those people to enable them to do the job. These basic responsibilities of management, supervision, and instruction, apply to every one from the General Manager to the Group Leader. The difference is largely one of scope. So when we use the term "Foreman" in these discussions, remember that it means you.

New members of this group will want to know what we hope to accomplish through Foremanship Discussions. These conferences offer all of us an opportunity to pool our combined job knowledge and "know how" in order to work out practical methods for solution of current shop problems; such problems for example as, what to do with the waivered employee, how to handle women employee problems, what should be my attitude toward the Union, etc. The conferences give us an opportunity to exchange experience and ideas and to gain a better grasp of the other fellows problems. Incidental results of participation in these conferences will be to equip you to fill higher supervisory jobs and to make your present job easier through understanding of company policy and the assistance which you can obtain from staff departments.

In order to make these benefits possible and to handle discussions effectively, we have a simple group organization. At each meeting we discuss a single selected problem. My job as Group Leader is to act as Chairman of the discussion, to think through the problem sufficiently in advance of the meeting, to get necessary facts for the group, and determine the main questions which ought to be discussed, then to write down on the blackboard the points made by the group, assisting to the best of my ability in finding the correct wording. I am not here in any sense as an expert or a lecturer.

Dan Mercer will act as Secretary to the group and will take attendance, notify members in advance of next meeting, note down whatever is written on the blackboard, and see to it that each member receives a written copy of the minutes. In this way, each of us will be building up a text book on Foremanship which he himself helped to write and which cannot be purchased in any other market.

Please note that nothing will go into these minutes but what is written on the blackboard or said by the leader. Everything else is strictly "off the record". The Division wants all of you to feel free to express your honest opinion on the topic of the discussion. This does not mean, of course, that this is a place where the supervisor comes simply to air his gripes and complaints, but so long as your remarks are constructively meant you need pull no punches. Arguments entered into in the heat of discussion will not be carried beyond the confines of this room.

The real test of the value of our discussions, however, will be the extent to which each one of us takes the conclusions at which we arrive in this room out into the plant and puts them to work. It helps get things straight to talk about them with other foremen, but in the last analysis, it is action that counts.

Today, instead of a regular discussion, we are going to see a movie. This film was developed by Pratt & Whitney Aircraft for its own foremen. Some of the procedures in the film are peculiar to Pratt & Whitney, and would not normally be used at Hamilton Standard, but the important thing in the film is the fact that most of the problems it covers are things we encounter every day and the spirit in which Foreman Joe approached those problems is the spirit in which we should tackle our supervisory jobs. In looking at this film, therefore, let us ignore the things that are different from our regular procedure and concentrate on the many things that we can learn from the picture about the art of getting things done through other people which is basically every foreman's job. The motion picture "It's Our Job" was then shown to the group.

SUMMARY

Until further notice this group will meet every Wednesday at the same time.

Because our discussion period is limited to one hour, it will be necessary for everyone of us to make a special effort to be punctual. It is to our interest to see to it that every single minute of that hour is available for discussion.

At our next meeting we are going to discuss the problem of job training. We will work out methods of instruction by which a supervisor can most effectively teach a new employee his job or an old employee a new job. Since this problem of training is one of the toughest that many of us have to face, let us all be here on the dot at 5:00 P. M. on next Wednesday.

MINUTES

Group D — FOREMANSHIP DISCUSSION — Meeting No. 2

March 2, 1944

The second meeting was opened at 10:30 A.M. with the following attendance:

PRESENT		PRESENT FROM GROUP E	ABSENT	
L. Berg	R. Menard	L. Filliere	E. Bernston	(absent)
C. Berner	S. Milliken	W. Flint	M. Burns	(absent)
E. Cameron	W. Perkowsky	V. Olson	G. Carmel	(absent)
G. Clark	A. Perotti	P. Tautkus	V. Caserta	(absent)
T. Coyne	L. Sclum		L. Oliver	(absent)
W. Goodwin	A. Strong		S. Rogers	(absent)
J. Howarth	P. Traficante		J. Sullivan	(absent)
M. Kossick	C. Villard			
R. McConnell	J. Woodall			
H. Madison				

Group Leader: P. R. Haugan
Group Secretary: L. Berg

JOB INSTRUCTION

ART OF TEACHING

INTRODUCTION

You will recall from our last meeting that the three main divisions of a foreman's job - and that means our jobs - are: (1) managing, or planning and scheduling, (2) supervising, or overseeing, and (3) instructing, or teaching.

The consensus of opinion is that the most important and the most difficult phase of our job today is that of instruction. Therefore, we shall tackle this current problem before all others in order that we may work out practical methods how to teach a new employee a job or an old employee a new job.

Hardly a day goes by in which we are not called upon to get a man to do a job correctly, quickly, and conscientiously. You and I can contribute a large and important share to winning this war of production by getting each man to do each job properly.

DEMONSTRATION

How do we get A man to do A job right? Telling a man how to do a job may be an excellent means of instruction when used properly. Let me illustrate with a selected simple example of teaching. How many know how to tie a Fire Underwriter's knot?

Let me explain that we are going to take apart the process of instruction and examine each part separately.

(The leader then told a member of the group how to tie the Fire Underwriter's knot. The member, however, was unable to tie the knot simply by having it described to him).

It appears telling alone is not good instruction. It was not the member's fault. Most people just don't "get it" through "telling". Many operations are difficult to describe in words; few of us can use the exact words necessary any how. Moreover, things seem complicated when listening to words. It is difficult to determine how much to tell and whether the worker understands. Remember: if the worker hasn't learned, the instructor hasn't taught. But yet, how many workers are being told how to do a job out in our factory right now!

Since telling alone is not enough, let me show another member how to tie an underwriter's knot. Think of this example in terms of your own job and in your own department.

(The leader then showed another member of the group how the knot was tied. He made no comment during this demonstration. Although this member came closer to tying the knot than did the member who was merely told how to tie it, he did not succeed in tying it properly).

Failure to tie the knot was not the member's fault. Showing, alone, is not good instruction. He saw the knot tied backwards. Even when seeing the job from proper angle, we don't "get it". Many of us just copy motions; thus tricky points are missed and we don't know what to look for. We can't translate what we see into what we should do. Yet, how many of our workers are being shown how to do their job at this very moment! Remember: if the worker hasn't learned, the instructor hasn't taught.

Practical industrial men have worked out a sure and dependable method of instruction that work every time if it is applied. In the early stages of the present war our government, realizing the tremendous increase in training problems which would fall upon supervision, invited these men to formulate a Job Instruction Training course for foremen and supervisors. It is the content of this course, and which is admittedly the most practical plan ever devised for on-the-job training, that we have adapted for the first five meetings of this group.

(Another member was selected to help to demonstrate this method).

Let us analyze the method of instruction rather than the simple tieing of the knot. I shall be a "lead man" in an electrical shop. This man has been in the labor gang for several months. He has been transferred to my group. I'm going to make an assembler of electrical equipment out of him. I'm allowing myself 5 days in which to do it. He is going to learn the first part of his new work - the underwriter's knot - now.
(The leader then taught the member how to tie the knot).

Since the member tied the knot perfectly, the conclusion is: the worker has learned, the instructor has taught. But what was the method used that applies to your job and your department?

ISCUSSION: WHAT ARE THE STEPS IN TEACHING A MAN A JOB?

I. Prepare the worker.

A. Put at ease.

B. State job - find out his experience.

C. Get interested.

D. Correct position.

II. Demonstration.

A. Tell, show, illustrate.

B. Stress key points.

C. One step at time.

D. Not more than operator can master.

III. Try out performance.

A. Have worker do job - correct him.

B. Have worker do job again and explain operations as he does it.

C. Repeat until he knows the job.

IV. Follow up.

A. Put him on job.

B. Designate help.

C. Check frequently.

D. Taper off on checking.

UMMARY

oday we have developed a very simple method of instruction that has been analyzed as ontaining four steps: (1) Prepare the worker. (2) Present the operation. (3) Try ut his performance. (4) Follow up.

ur next few conferences will be devoted to "learning by doing" in which almost every mem- er will be given opportunity for practice in actual instruction.

ith a reminder that the eagle-eye of criticism falls light upon b ginners, the Group ader called for one volunteer to put on a 15 minute demonstration of instruction in a mple job. Other members were asked to consider some appropriate example in connection ith their work that will lend itself to the topic of job instruction.

MINUTES

Group K — FOREMANSHIP DISCUSSION — Meeting No. 3

March 7, 1944

The third meeting was opened at 1:30 A.M. with the following attendance:

PRESENT		PRESENT FROM GROUP F	ABSENT	
J. Bartok	S. Coda	H. Staiger	A. Balcome	(absent)
M. Bicknell	J. Mariner		H. Kawecki	(day off)
S. Casey	W. Kereljza			
J. Casterta	A. L'Heureux			
R. Clough	J. McNiel			
O. Dieg	M. Midura			
F. Dutton	J. Muccio			
P. Dykos	T. Orefice			
J. Fagan	A. Smith			
W. Glode	J. Unterreiner			

Group Leader: J. R. McPherson
Group Secretary: R. Clough

JOB INSTRUCTION

JOB BREAK-DOWN

INTRODUCTION

(Hourly rated employees were reminded to insert the order number XX48III on their job tickets so that the time spent in these conferences may be credited to the proper account).

At our last meeting, we worked out a method of instruction that will work every time if we but apply it. The method was broken down into four steps: (1) Prepare the worker. (2) Present the operation. (3) Try out performance. (4) Follow-up.

We examined inadequate teaching as well as the correct method and concluded that if the worker hasn't learned, the instructor hasn't taught.

Now we are to see a demonstration of job instruction. This example is not expected to be perfect since it is put on to bring out some fundamental points to be discussed today.

(Mr. Jesse L. Mariner instructed a learner on spot facing four holes (notches) on a ring. The group was invited to refer to last week's discussion on correct job-instruction and to compare it with the sample being demonstrated).

Jesse Mariner was good enough to give us a picture of how we really instruct on the job. He knew the purpose of presenting the sample job-instruction, so he will be aware that any comments we make are not directed personally at him but are to bring out the problems and the faults in instruction.

(A discussion of the demonstration followed in which the group noted the instructor had laid particular stress on the parts of the operation which could "make or break the job".

The leader then distributed copies of a job break-down sheet - HSP F-547).

In order to get ready to instruct properly it is necessary to organize the job in our own mind. One quick and simple way to organize a job is to break it down into its important steps and key points. An important step is (definition): a logical segment of the operation when something happens to advance the work. A key point is (definition): (1) a thing that may "make or break" the job (2) a hazard (3) a thing that makes the job easier to do.

I have said that a job break-down should be a help to organize the operation in the instructor's mind. In other words it should not cover every conceivable step, point, motion or precaution, nor provide an instruction sheet for employees. However, it should be the one best way the operator should do the job - in short, a job break-down is just a note from ourselves to ourselves.

Let us run through the process of making a job break-down on the board. Let us use as an example, an operation with which we are all familiar. What are the important steps and what are the corresponding key points of tieing the underwriters' knot?

DISCUSSION

The discussion stimulated by this question established a job break-down for tieing the underwriters' knot with only 5 steps and 45 words (see below). This breakdown was contrasted with a detailed description demanding 13 steps and 163 words.

IMPORTANT STEPS	KEY POINTS
(1) Untwist and straighten	(1) 6 inches - with thumb and 1st finger.
(2) Make r. h. loop	(2) in front of main strand.
(3) Make l. h. loop	(3) pull toward you, under stub, behind main strand.
(4) Put end through loop	(4) back to front.
(5) Pull taut	(5) ends even, knot snugly adjusted.

SUMMARY

We are all aware that often we think we know a job so well that we feel it is unnecessary to plan how to put it over to another with the result that we overlook the points that "stump" the learner. Sometimes we find out we really don't know a job until we try to instruct someone how to do it. Therefore, it is always necessary to think through in advance an orderly plan for presenting an operation to a worker.

We have seen how simple a job break-down can be and how little time it takes to prepare one. The process of making a job break-down becomes even easier when, with practice, we fix clearly in mind, the definitions, as they are described on the break-down sheets I have distributed.

(The three members who volunteered to put on a demonstration at the next conference were advised to prepare a job break-down of the job they intend to instruct).

The next meeting of this group will take place on Tuesday, March 14, 1944, at 1:30 A.M.

MINUTES

oup E — FOREMANSHIP DISCUSSION — Meeting No. 4

March 17, 1944

e fourth meeting was opened at 10:30 A.M. with the following attendance:

PRESENT		ABSENT	
Andreotta	A. Lang	J. Desso	(absent)
Bergeron	D. Loftus	M. Hallowell	(absent)
Calkins	W. McAdam	E. McMahon	(absent)
Civiello	A. Mannella	N. Quimby	(absent)
Dion	R. Mason	S. Tatem	(absent)
Dubiel	V. Olson		
Filiere	K. Pitkin		
Fogarty	P. Tautkus		
Hancock	R. Ten Eyck		
Hemingway	S. Vondoloski		
Humay			

oup Leader : P. R. Haugan
oup Secretary: A. Lang

JOB INSTRUCTION

Application of "How to Instruct"

TRODUCTION

our first meeting, it was stated that we would discuss in these conferences current op problems. Since job instruction is one of our most pressing problems, we worked t a sure-fire method of how to instruct. Last week, we examined a Job Breakdown Sheet d found it to be a quick and simple aid to organizing a job in our own mind before structing. Both the method of instruction and the break-down of a job into its im- rtant steps and key points will help us to do a better job of teaching with less effort d time. Moreover, we may be assured that the worker has learned his job properly if apply what we have worked out here. When we have workers who do well because they re taught well, we get the credit. So, it certainly is worth the effort to apply this eful scheme of instruction.

ten we have heard the remark, "That stuff is true enough and looks good when written wn, but so what? How do I benefit from it?" At this session we are going to see how apply what we have discussed at previous conferences; we are going to "learn by doing"; at is, we are going to use the whole plan of "How to Instruct". It is a real advantage each member to get the benefit of the comments of others. Therefore, everyone who has e opportunity to put on a demonstration before the group should invite criticisms and ggestions from the group so that he can perfect his method of instruction.

(The leader then distributed break-down sheets, U.S.P. F-547, and asked the members to jot down the steps and key points as they were brought out in the demonstrations that followed.)

(W. McAdam instructed a learner how to make a shipping carton for a control unit.)

In the discussion that followed it was brought out that the instructor had an organized plan of how to instruct. The job was broken down into its important steps and key points. Since, in each case, the worker had learned, it was concluded the instructor had taught.

(After the demonstrations had been discussed the leader called for four volunteers to continue to "learn by doing", to put on more demonstrations of typical instruction at the following meeting. Each member was invited to break-down, on H.S.P. F-547, that job in his department which he most commonly had to teach beginners, and to pass it in to the leader at the next conference. The group was asked to consider the process of breaking down a job for instruction as a specific aid to making their job of instruction easier. The leader offered to meet any member of his job to analyze and to break-down into steps and key points the job for instruction purposes.)

SUMMARY

We explored quite fully today one thing, a job break-down sheet that an instructor should prepare in order to get ready to instruct.

Another aid to proper instruction is a time table. A question that must be answered by all of us is how much skill should a worker have? and by what time should he have it? So that training may be done by plan, and not by chance, it is worthwhile to prepare a time table that will serve to ourselves as a chart of the status of training. A table for a group of 10 - 15 workers can be prepared in ten minutes, and it can be checked and revised weekly in five minutes. Let me sketch out on the board a time table of a few operations for which a supervisor might be responsible.

	Drill	Bore	Ream	Face	Taper Turn	Burr & Finish	Etc.
WHITE	X	X	X	X	X	X	
NOLAN	X	X	X	11-10	—	—	
SMITH	11-1	11-20	—	X	X	12-1	
JONES	—	—	X	11-15	12-1	12-8	
ETC.							

* X - Means the worker can already do the job.

— = Means he doesn't need to know the job.

10-15, 11-5, etc., indicates the dates the supervisor has set for himself when he plans to have his men TRAINED to do the jobs required.

ur jobs will be different of course. However, the idea is the same everywhere. You n easily make a similar time table for your operations.

e making of a time table is no less planning and scheduling than the allocation of bs and the checking of the flow of materials. Thus, we become aware that the functions our job to instruct is closely related to our function to manage. The inter-relation these functions will be even more apparent in our later conferences.

e next meeting of this group will take place one week from today, at the same hour.

MINUTES

oup L — FOREMANSHIP DISCUSSION — Meeting o. 5

March 21, 1944

he fifth meeting was opened at 2:30 A.M. with the following attendance:

PRESENT		PRESENT FROM GROUP M	ABSENT	
. Anderson	F. Larson	A. Diehm	J. Emerck	(absent)
. Balfour	F. Lennon		W. Finley	(absent)
. Cade	A. Litvinchyk		J. Lavoie	(absent)
. DeFazio	L. Matthews		R. Southergill	(absent)
. Finley	D. Smith			
. Ivers	W. Smith			
. Kobylevic	P. Tierney			
. Kvartunas	R. Vuterick			

roup Leader: J. R. McPherson
roup Secretary: L. Matthews

JOB INSTRUCTION

JOB BREAK-DOWN

IRODUCTION

et us examine the Pocket Card (HSP Form 572). You will notice on one side the four steps n teaching a job: (1) Prepare the worker. (2) Present the operation. (3) Try out erformance. (4) Follow up. On the other side, the four steps in getting ready to teach job: (1) Have a time table. (2) Break down the job. (3) Have everything ready. (4) ave the work place properly arranged.

f the four, we have discussed the first two. We have seen how, by preparing a time table, supervisor can eliminate much unnecessary instruction and schedule what must be taught to it his own time. We have seen further how, by preparing a job break-down, the supervisor an reduce what he has to teach to the essential minimum. These two get-ready steps are mportant to the supervisor since they save his time. Without them, everyone of us probably as spent twice as much time teaching as he really needed to spend.

he remaining two steps-have everything ready, and have the work place properly arranged ust as the worker will be expected to keep it-are important from the standpoint of both he supervisor and the learner. Apologizing for wrong equipment, or forgetting something essens the worker's respect for his instructor. Any single thing that is wrong sets a oor example to employees. It's our job to set the right example. Even bad housekeeping, n some departments, is directly attributable to sloppy teaching. If we set the right example, he worker learns good work standards which reflect back upon us as good instructors.

hen you look at the following demonstrations, check the four get-ready points as well as e way in which the job is instructed.

he Pocket Card (HSP Form 572) is the only reference we need for instruction. The Govern- ent program of "Job Instruction Training" takes ten hours; but, even though we are con- uming only five hours of our allotted conference time to job instruction, we shall have ost nothing if we refer often to the Pocket Cards.

EMONSTRATION

Joe Ivers instructed P. Balfour in the job of packing a load of gear segments.

Al Litvinchyk instructed a learner how to notch a blade for "Edgmill" process.

DISCUSSION

In order to help the instructor to perfect his method of instruction, the group was more severe in its criticism than at any previous conference. However, it was concluded that the instructor had a plan of instruction in mind, and that he did apply the method, and "learned by doing" so that if he were to repeat the instruction now, he would present it even more clearly to be assured the worker would learn.

SUMMARY

Many members of this and other groups have commented that this method of instruction works out fine for the simple demonstrations that have been put on here, but they doubt the applicability of it to jobs in their departments that are made up of several operations, each of which takes a long time. If we have an operation taking several hours, it can be broken up generally into several smaller operations using the 4-step method of instruction to put over each operation.

Another special instruction problem is encountered in a noisy section of the shop. Here again, small units should be presented at a time. In a noisy atmosphere we must show so well that the showing carries the whole instruction. Before and after showing, we can take the worker to a less noisy place to discuss the operation and check his knowledge. If we use such consideration in teaching a job, our own job of instruction will be easier.

It is to the advantage of each of us to become good instructors. As the war progresses we will have to instruct more and more new workers. What sticks in the worker's mind is what counts when we have finished our instruction. Once again, let us remind ourselves, if the worker hasn't learned the instructor hasn't taught!

The next meeting of this group will be one week from today at the same hour.

MINUTES

Group D — FOREMANSHIP DISCUSSION — Meeting No. 6

March 30, 1944

The sixth meeting was opened at 10:30 A.M. with the following attendance:

PRESENT		PRESENT FROM GROUP E	ABSENT	
L. Berg	L. Oliver	E. Andreotta	M. Burns	(absent)
E. Cameron	W. Perkowsky	J. Hancock	V. Caserta	(absent)
G. Clark	A. Perotti	A. Lang	J. Howarth	(absent)
T. Coyne	L. Solum		R. McConnell	(absent)
W. Flint	P. Traficante		H. Madison	(absent)
W. Goodwin	C. Villard		S. Milliken	(absent)
M. Kossick	J. Woodall		A. Strong	(absent)
R. Menard			J. Sullivan	(absent)

Group Leader: P. J. Haugan
Group Secretary: L. Berg

JOB INSTRUCTION

S U M M A R Y

INTRODUCTION

This is the fifth session we have devoted to Job Instruction. Since this is the final session devoted to our job of instructing, let us make a determined effort to get all we can out of it.

We are all familiar with the four step method of instruction, as well as the four points to be used to get ready to instruct. We are conscious of the fact that if the worker hasn't learned, the instructor hasn't taught.

In these days of production for war, when time is seemingly more important than ever before, it is a "must" that this sure method be used. Our problems these days have been increased as the quality of available labor has deteriorated. The only way an instructor can work himself out of these problems is through training. Otherwise, he is nothing but a trouble shooter, dealing with one emergency after another, never getting his problems solved; he just "patches them up" temporarily. The constant use of these four steps of how to instruct, and the four get-ready points (reference: HSP F-572) will enable us to work toward a permanent solution to the many problems that normally ramify from inadequate instruction-and we have seen that most of our headaches are caused by the fact that the workman had not "learned" in the first place.

While all of us are convinced that this method of instruction is the one, sure way to teach, some have voiced the opinion that they think they do not have the time to train men thoroughly themselves. The reason, they say, why they cannot take the time is that "something is always coming up". Why are these things always coming up? Isn't it usually because a man has not learned a job? If an instructor takes the time to train from his first contact with the worker, the emergencies caused by men (as opposed to those caused

by machines or material) will become fewer as each worker really learns. What is more, the four get-ready points and the four steps of instruction, beyond being the method that assures us the worker will learn, gives us the means to reduce our teaching time to about half of that which most of us use now. Training is one tool, as it were, that a supervisor can take hold of and do something with, as we shall witness in the demonstrations today. Since these demonstrations are the last we shall see in this phase of our series of conferences, let us be hyper-critical, today, and let no single significant error go unmentioned.

DEMONSTRATION AND DISCUSSION

E. Cameron instructed Angelo Perotti how to replace a broken blade in a hack saw. Even though this job appeared simple at first glance, the group pointed out to Cameron why the 4-step method of instruction would assure him every time that the worker had learned.

Pat Traficante instructed L. Solum how to handle a blade properly in order to put it into a fixture. Pat had a definite plan of instruction and carried it through until the worker had learned. The group made suggestions to Pat as to ways he might point out the key points of a job. A discussion as to the advantages and disadvantages of instructing in a positive as opposed to a negative way followed.

The leader asked the question, "If you were pressed for time, which of the four steps of instruction would you leave out?" The group was unanimously in agreement that no step should be left out if the worker is to learn; and, if time is pressing, it is better to put off the teaching job until time is available when the whole process of instruction can be used.

SUMMARY

At our first session, we saw that "Our Job" is a big one and a difficult one. Teaching, we noted, is only one phase of our job. Nevertheless, because of the quality of new workers, and the demands of Selective Service, we felt that instruction is so vitally important that we have devoted five discussion periods to perfecting the correct method of on-the-job instruction.

Even though the problem of instruction is so important as to demand five full sessions, we have seen that there are only a few points that must be remembered in order to put this method of instruction to work:

First of all, each foreman should analyze the problems of instruction in his department (or line). Then, he should schedule his teaching to fit his needs and his time.

Secondly, he should analyze each job from the point of view of instruction. That is, use a job-breakdown sheet to note the important steps and key points so that nothing essential will be overlooked and nothing irrelevant will be included.

Finally, by using the four steps outlined on the Pocket Card, the instructor presents the job, logically, to the worker.

We have seen how this method will make our job easier. However, no single solution for any problem we discuss here is claimed to be a cure-all. Nobody contends that even with good Job-Instructor-Training, a supervisor automatically cures all his problems; but, the experience of every plant using J. I. T. and giving the system a fair trial has been that their problems of production, personnel, and safety have been materially reduced by this effective method of job instruction.

Once workers are properly taught, we need no longer spend most of our time correcting troubles that need never have arisen. We must remember, "It's Our Job" to teach, and that if the worker hasn't learned, the instructor hasn't taught.

Next week, when this group meets here at the same time, we shall discuss a problem more directly connected with another phase of our job than that of instructing.

MINUTES

Group L — FOREMANSHIP DISCUSSIONS — Meeting No. 7

April 4, 1944

The seventh meeting was opened at 2:30 A.M. with the following attendance:

PRESENT		ABSENT	
P. Balfour	F. Lennon	J. Smith	(absent)
J. Emerok	A. Litvinchyk		
A. Cade	L. Matthews		
J. DeFazio	P. Piwarczyk		
M. Finley	D. Smith		
J. Ivers	W. Smith		
M. Kobylevicz	R. Southergill		
S. Kvartunas	P. Tierney		
F. Larson	R. Wuterich		
J. Lavoie			

Group Leader: J. R. McPherson
Group Secretary: L. Matthews

PLANNING AND SCHEDULING

INTRODUCTION

The meeting opened with an informal discussion on the question on "Why are so many people absent from these discussions when the discussion falls on the last day of the month?" The leader pointed out that it had been observed in this and previous years that attendance at these conferences tended to fall off in the last week of each month. Particularly when the conference happened to fall on the last day of the month, there are frequently as many as 50% absent. The group explained that this happened because they were usually pressed at the end of the month to complete their production quota for that month. It was further developed that there are many factors more or less outside of the foreman's control which operate to prevent him from meeting his schedule, e.g. absenteeism, material shortage, machine breakdowns, etc.

In view of the fact that there were apparently so many adverse factors beyond the control of the foreman, the leader then raised the question whether it was not highly unfair to expect the foreman to complete his schedule on time. In order to arrive at a correct answer to this question, the leader sketched out on the blackboard a simple diagram illustrating some of the general problems of planning and scheduling of the work of the division as a whole. It was shown that the importance of each supervisor meeting his individual schedule on time arose from the vital importance of the division meeting its agreed date of delivery of finished propellers. It was shown also that the planning and scheduling done at Hamilton Standard was part of an immensely larger job of planning and scheduling involved in the prosecution of the war, but that small as was the part each of us played in this larger picture, it was nevertheless perfectly possible that the failure of anyone of us to plan and schedule properly might result in the failure of the plan as a whole. It was further pointed out that Hamilton Standard could not offer to the Navy an excuse for failure to deliver propellers on the agreed date such as absenteeism, machine breakdowns, material shortages, etc. A sound job of planning and scheduling must allow for such contingencies and succeed in spite of them. In the same way, Hamilton Standard can-

not expect excuses of this type from a foreman who fails to meet his individual schedule. In war time as well as in peace time the success of a company or a foreman is based on their ability to discharge responsibility; to deliver the goods according to plan and on schedule.

In view of these facts, the group agreed that it was important to consider those factors which might disrupt the foreman's plans and schedules and to determine what must be done to make allowance for them.

WHAT ARE SOME FACTORS FOR WHICH THE FOREMAN MUST ALLOW IN PLANNING AND SCHEDULING?

1. Breakdown machine
2. Shortage of materials
3. Absenteeism
4. Labor-green
5. Engineering changes
6. Re-work and scrap
7. Lack of interest on rough parts

   Lack of cooperation

   Lack of sufficient time
8. Etc.

The group agreed after a general discussion of these factors, that the foreman could best allow for them by planning to produce a somewhat higher daily quota than was necessary to exactly meet his schedule. It was further agreed that if this were done in the earlier part of the month, foremen should not find themselves bogged down with work at the end of the schedule period.

SUMMARY

Planning and scheduling is the essence of Management. At the outset of our discussions we have seen that there are three principal parts to a foreman's job - instruction, management, and supervision. We have discussed instruction at some length during the past five sessions and today we have covered in a very general way the foreman's responsibility as a manager. Future discussions will give us an opportunity to talk over specific problems which involve management and the ability to plan and schedule, and these will give us a better grasp of this subject than we can hope to obtain from today's discussion. Next week, however, we will take up the third phase of a foreman's job, supervision, or overseeing the work of others.

MINUTES

roup L FOREMANSHIP DISCUSSION Meeting No. 8

April 11, 1944

he eighth meeting was opened at 2:30 A.M. with the following attendance:

PRESENT		ABSENT
. Balfour	F. Lennon	None
. Emerck	A. Litvinchyk	
. Cade	L. Matthews	
. DeFazio	P. Piwarczyk	
. Finley	D. Smith	
. Ivers	J. Smith	
. Kobylevicz	W. Smith	
. Kvartunas	R. Southergill	
. Larson	P. Tierney	
. Lavoio	R. Wuterick	

roup Leader: J. R. McPherson
roup Secretary: Leo Matthews

SUPERVISION

NTRODUCTION

It's Our Job" has key-noted our series of conferences this year. So that we might nalyze our job, we have separated it into three main divisions: namely, instruction, anagement, supervision.

n order to discuss our job, such a division is possible although we realize that these hree functions are inseparable in practice. We have concluded that our job will be asier if we instruct properly. Last week, we discussed the general, over all job of anagement and noted particularly that, due to reoccurring emergencies, it is necessary o allow a margin for the factors that might disturb our individual planning and sched- ling.

oday, we have as a topic, supervision. Supervision is a word that is often used as a lanket term to cover our whole job. In order to avoid confusion, it is worthwhile to istinguish between the function of management and supervision. (Instruction, or teach- ng, is seldom confused with the overseeing functions, or supervision).

et's bring out this difference more clearly by taking a specific case. Suppose Joe ecides he needs a storage rack to be placed at a new machine which is to be installed. e must decide how large the rack must be, how it is to be designed, where it will be laced, which way it will face, etc. Also, he must decide when the rack must be ready n order to have it installed at the same time as the machine is installed. So far Joe as been planning and scheduling. This is management.

im sends a maintenance man up and Joe gives him specific instructions as to exactly hat he wants and when he wants it. Then Joe must follow-up the job to be sure it is

ust what he ordered and that it will be ready on time. He will check to be sure it s the right size, that its design is as planned, that it is placed right, and later n that it is used correctly. Joe is now making sure the job is carried out as planned. his is supervision.

et us set for our goal today the working out of a general method by which any foreman an improve his supervision. The job of supervision is vital and worth serious thought. he general plan which both this country and this company is going to follow has been aid out. We examined the planning and scheduling last week. The big job now is to ee that the results come as planned - the responsibility for this job is right in our ands. The ball has been thrown to us - we've got to run with it!

ur job of supervision is not less difficult than that of instruction or management. ince we have already given some thought to the other phases of our job, let us deter- ine now, what supervision involves, how we recognize poor supervision, and what we can o to improve our supervision.

ISCUSSION

. What Are Some Of The Foreman's Supervisory Duties in Carrying Out A Plan And Schedule?

A. Give orders andfollow up.

B. See that right man is on the right job.

C. See that proper tools are available.

D. See that machines and equipment are properly set up and in good condition.

E. See that material is available.

F. See that work is checked (so to eliminate scrap and rework - to maintain quality).

G. See that operation sheets are used.

H. See that schedules are met.

I. See that safe practices are observed.

J. See that safety equipment is in use.

K. See that company rules are obeyed.

L. See that morale is maintained.

M. See that paper work is kept up.

N. See that good housekeeping is maintained.

O. Maintain good industrial relations.

In the general discussion of this question, it was decided that "give clear orders" and "follow up" were the most important supervisory duties. Always, of course, a sharp eye must keep costs down, regardless of peace or war.

II. What Are Some Signs Of Poor Supervision?

A. Poor housekeeping.

1. Littered aisles

2. Parts scattered

3. Dirty floors

4. Badly stacked materials.

5. Untidy benches.

B. Idle men.

C. Excessive machines, breakdown.

D. Missing guards and hoists, loose parts, make-shift fixtures, empty oil cups.

E. Lighting system and ventilation.

F. Poor discipline.

G. Insufficient or broken down trucks and equipment.

In the discussion of these signs of poor supervision it was conceded that virtually everyone of them could be found in Hamilton today. In an effort to find a means to eliminate them, the group discussed the next question.

III. What Can A Foreman Do To Improve Supervision?

A. Be sure orders are clearly understood.

1. Know the plan and schedule.

2. Give orders to right men.

B. Follow-up.

1. Have a check list and a time table.

2. Take action promptly.

C. Developing leadership qualities.

1. Be cooperative.

2. Be fair.

3. Be tactful.

4. Study other man's point of view.

5. Maintain respect.

6. Know your own mind.

SUMMARY

The group leader summarized the discussion by pointing out that, to improve his supervision, a foreman must, first of all, be sure every employee understands exactly what he has to do. In order to be assured of that, a foreman must have a definite idea himself of what must be done - in other words he must give clear orders to properly trained help and the orders must be based on his clear-out plan and schedule. Moreover, he must follow up all jobs systematically but in order to do that he must, first, determine what should be followed up and then perhaps prepare a check list and time table. Finally, this method can be applied by a man who has leadership andcommands the respect of his workers. Hence, a foreman who develops qualities of leadership, makes his job of supervision more interesting and easier for himself.

It was reemphasized that the function of supervision cannot be separated in practice from that of management or of instruction, but that we have discussed it separately in order to work out a simple formula that might be applicable to any foreman's job as a way he can improve his Supervision.

Since today's discussion emphasized the importance of giving clear orders, the leader announced that perhaps it would be worthwhile to devote next weeks's discussion entirely to the subject of giving orders.

The next meeting of this group will be one week from today, at the same time.

MINUTES

Group L — FOREMANSHIP DISCUSSION — Meeting No. 9

April 18, 1944

The ninth meeting was opened at 2:30 A.M. with the following attendance:

PRESENT		ABSENT	
P. Balfour	F. Larson	W. Finley	(absent)
J. Emerck	J. Lavoie	F. Lennon	(absent)
A. Cado	A. Litvinchyk	P. Piwarczyk	(absent)
J. DeFazio	L. Matthews	J. Smith	(absent)
J. Ivers	D. Smith	W. Smith	(day off)
M. Kobylevicz	P. Tierney	R. Southergill	(day off)
S. Kvartunas	R. Wuterick		

Group Leader: J. R. McPherson
Group Secretary: L. Matthews

G I V I N G O R D E R S

INTRODUCTION

If we were to ask the man in the shop to define a foreman's job, he wouldn't say anything about management, supervision or instruction. He doesn't think in that kind of language. To him, the foreman is simply "the boss", the man through whom he gets his orders. Actually that is a pretty good definition of a supervisor. Everyone of us spends a considerable part of his time directing the actions of others. All of our managing, planning, and scheduling, every decision that we make has to be translated into orders before it can become effective. However, giving orders in itself is not management, but merely the channel by which plans, schedules, and decisions are put to work.

There is a lot more to this business of giving a good order than merely barking out a military command. No plan can be followed nor any schedule met, unless the orders we give are clear and complete. Further, we must remember always that we are dealing with human beings - - - - each of whom is different from all other human beings. We must adapt our manner of giving an order to the situation with which we have to deal.

It has been said that the day of giving orders has gone. "Polite requests" have had to take the place of orders. That is to say the boss-type has been replaced by the leader type foreman. Let us not waste time quibbling over terminology since the fact remains that "the something", which we shall call an order is the only channel by which work gets done, it is well worth our time to give considerable thought to what goes into a complete order, what factors have to be considered in giving an order, and what is the best manner of giving an order.

I. WHAT QUESTIONS MUST AN ORDER ANSWER?

A. What?

B. When?

C. How?

D. Where?

E. Why?

F. Who?

In a general discussion of the above points it was pointed out that all questions must be answered either directly or by implication in giving an order.

II. WHAT MUST BE CONSIDERED IN GIVING AN ORDER?

A. Give the order to the right man.

B. Make sure the order is understood.

1. Explain clearly and in sequence.

2. Follow up -- correct when necessary.

3. Proper materials and tools to do job.

4. Have order repeated.

5. Demonstrate if necessary.

C. How long will it take to do job -- plan and schedule.

D. Write out long or complicated orders.

E. Caution man on pitfalls, such as scrap, etc.

F. Keep orders simple.

G. Caution man on safety.

H. Give orders in positive rather than negative way.

I. Use proper approach -- take the man into consideration.

J. Know what you want yourself.

III. WHAT ARE THE VARIOUS KINDS OF ORDERS?

A. Demand or Direct Order

Should be used

1. For emergencies -- special job.
2. To discipline.
3. Where speed is important.
4. In dealing with careless and/or lazy workers.
5. In cases of danger.

B. Request Order

Should be used

1. To develop cooperation.
2. To get unpleasant job done.
3. To get difficult job done.
4. To obtain extra effort.
5. To the sensitive or nervous worker.

C. Suggested or Implied Order

Should be used

1. To get improvement from experienced employee.
2. To correct without antagonizing.
3. To encourage initiative.
4. To the man who assumes responsibility.

When giving an order:

1. Be sure it answers the six questions -- who, what, when, how, why, where.
2. Take into account the man and the situation. Put yourself in the other fellow's shoes -- adapt the matter and manner of your order to these factors.
3. Unless a direct order is clearly indicated, do the tactful thing -- use either a request or a suggestion.

4. Follow up -- be sure the order is carried out.

It was pointed out that giving orders is the only channel through which a supervisor can put his plans, schedules and decisions to work.

The next meeting was announced for one week from today at the same time.

MINUTES

Group E — FOREMANSHIP DISCUSSION — Meeting No. 10

April 28, 1944

The tenth meeting was opened at 9:00 A.M. with the following attendance:

PRESENT		ABSENT	
M. Civiello	W. McAdam	D. Andreotta	(absent)
J. Desso	A. Mannella	A. Bergeron	(absent)
R. Dion	R. Mason	J. Calkins	(absent)
L. Filliere	E. Morrissette	M. Dubiel	(absent)
F. Fogarty	W. Shearer	D. Hemingway	(absent)
M. Hallowell	N. Quimby	E. McMahon	(day off)
S. Hancock	P. Tautkus	V. Olson	(absent)
J. Humaj	R. TenEyck	K. Pitkin	(sick)
A. Lang	S. Vendoloski	S. Tatem	(absent)
D. Loftus			

Group Leader: P. R. Haugan
Group Secretary: A. Lang

SCRAP AND REWORK - CAUSE AND EFFECTS

INTRODUCTION

Up to this point in our conference series we have been taking the foreman's job apart and for purposes of analyzing it we have broken it into a job of (1) management (2) supervision (3) instruction. But in practice we know that we cannot break it down in this manner; the foreman must be manager, supervisor and instructor all at the same time.

From this point on, therefore we shall examine problems which challenge our ability to use all three parts of our job. We will start today with a problem which is pre-eminently a foremanship rather than a management problem - the problem of scrap and re-work.

The importance of our scrap problem today is obvious when we look at some of the figures. During the month of March 1944 the net loss to the company in dollars due to work spoiled in handling or processing was slightly more than a quarter of a million dollars. A quarter of a million dollars is a lot of money, but perhaps, in this day of astronomical figures, if we consider what could be done with this money our concept of the amount may be clearer. A quarter of a million dollars would buy 50 average 6 room houses, or 250 Ford autos, or 10 Bullard Mult-au-matics or 50 standard engine lathes, or it would pay the salary of 1200 additional expert employees. If permitted to continue at this rate, our losses from scrap and rework will exceed three million dollars for 1944!

Yet this quarter million dollars which we squandered on nothing last month is only a small part of the real cost of scrap and rework. From every point of view it would be far better for the Company to take the quarter-million one-dollar bills, pile it up in the parking lot, and destroy it by fire than to lose it in scrap and rework.

The money that is lost can be recovered, but the time that is lost, the machines that are tied up and ineffectively used, the vitally needed propellers that should have been in use are so much scrap metal -- these things can never be recovered. You people who participate in these conferences are the only ones who can really do something about this scrap problem. And if you reduce scrap and rework in your department you will have done a great deal more than save your Division some money. You will contribute in a very real way to your Country's war effort.

DISCUSSION

I. WHAT ARE SOME CAUSES OF SCRAP AND REWORK?

A. Faulty material.

B. Insufficient inspection of rough material.

C. Lack of interest of job.

D. Lack of training.

E. Inexperienced help.

F. Engineering changes.

G. Improper use of tools.

H. Poorly designed or defective fixtures.

I. Poor supervision.

J. High quotas.

K. Poor housekeeping.

L. Carelessness.

M. Improper handling.

N. Low morale.

During a general discussion of the above points the group decided that the overall cause of scrap and rework is carelessness.

II. WHAT ARE THE COST ELEMENTS IN SCRAP AND REWORK?

A. Labor

B. Material

C. Overhead

A discussion of the apportionment of costs followed and the group made interesting calculations as to the spread of costs over these three elements. It was pointed out that sale of scrap as junk brings back a small amount of money which is not considerable enough to alter the cost picture.

III. WHAT ARE SOME OF THE OTHER EFFECTS OF SCRAP AND REWORK?

A. Lower morale.

B. Failure to meet schedule.

C. Higher cost of finished product.

D. Loss of prestige.

E. Loss of HSP labor.

F. Loss of HSP time.

G. Loss of vendor time.

H. Increased defective material.

I. Increased quota.

Discussion on this question brought out the fact that the effects of scrap extend far beyond Hamilton Propellers and that time and effort wasted on scrap and rework is a vital loss and one that can never be recovered.

SUMMARY

The leader summarized the discussion by pointing out that this group had

(1) Seen the tremendous cost of scrap and rework both in time lost and money lost.

(2) Found the various causes of scrap and rework and decided that poor supervision and carelessness were the most important causes.

(3) Found that the effects of scrapand rework extend far beyond Hamilton Standard Propellers.

The next meeting was announced for one week from today at the same time - at which time this group will discuss some of the cures for the problems raised here today.

MINUTES

Group J — FOREMANSHIP DISCUSSION — Meeting No. 11

May 4, 1944

The eleventh meeting was opened at 6:30 P.M. with the following attendance:

PRESENT		ABSENT	
C. Chapin	B. McNeil	E. Bamford	(absent)
A. Churilla	W. Mainville	A. Charest	(absent)
T. Gutowski	J. Racicot	W. Cribbs	(absent)
F. Hobbs	E. Renault	S. Goldberg	(absent)
G. Johnson	R. Soderquist	H. Knox	(absent)
W. Kowalewski	C. Swenos	F. Landers	(absent)
		S. Masnicki	(absent)
		T. Newberry	(absent)
		E. Parker	(absent)
Group Leader: R. W. Driggs		H. Roberts	(absent)
Group Secretary: C. Chapin		W. Shearer	(absent)

SCRAP AND REWORK - CURE

INTRODUCTION

Last week this group discussed the cause and effect of scrap and rework at Hamilton Standard Propellers. We found that scrap and rework were extremely expensive in terms of dollars and cents. This year, if we continue at the rate we are going, Hamilton Standard Propellers will lose in spoiled work over three million dollars - a tremendous sum! If we in these conferences -- not only this group, but each of the eleven other groups -- can arrive at some method of reducing this loss to any substantial extent, the money which has been invested to make these foremanship discussion groups possible will have paid for itself over and over again.

Yet this group found also, last week, that this loss in money, great as it is, is the lease part of the actual loss from scrap and rework. So far as money is concerned, it would be better for the company to take the three million dollars and burn it than to let it be lost in scrap and rework; for scrap and rework not only lose money, but, more important, lose time, and time at this particular stage in human events is far more precious than money. The man-hours that go into scrap and rework instead of into the production of propellers are lost irretrievably, and their loss cannot be estimated in money.

This group listed last week a number of possible causes of scrap and rework -- lack of skill or precaution on the part of the operator, failure to check on the part of the foreman, defective machinery, equipment or tools, wrong blueprints and outmoded instructions -- and had we devoted more time to the problem we might have listed a great many more. But in the discussion it was found that in most cases the fundamental cause was carelessness. Scrap and rework are mistakes, and it is men and not machines which make mistakes. Part of our problem today, therefore, is the elimination of carelessness - carelessness of the part of the operator, and carelessness on our own part.

The purpose of this meeting is to determine methods for the reduction of scrap and rework at Hamilton.

DISCUSSION

I. SHOULD WE TRY TO ELIMINATE SCRAP?

Discussion of this question brought out the following points:

A. The primary objective is to turn out the greatest possible number of propellers.

B. In the effort to turn out the greatest possible number of propellers some scrap is inevitable and normal.

C. Normal scrap, however, is not a fixed percentage; it can only be defined as the residue of scrap which still occurs after everyone concerned has done his level best to prevent it.

D. Therefore, we should try to eliminate scrap, since only by trying to eliminate it, can we make sure that what scrap does occur is normal and healthy.

II. HOW CAN WE GO ABOUT REDUCING SCRAP?

A. Closer supervision

B. Build up employees attitude and confidence.

C. Careful and simplified instructions on job.

D. Investigate possible causes before and after.

III. HOW CAN WE MAKE MEN CAREFUL?

A. Reprimand careless work.

B. Recognize careful work.

C. Stimulate competition in quality.

1. By departments

2. By lines - between shifts

IV. HOW CAN WE ELIMINATE POSSIBLE CAUSES OF SCRAP?

A. Analyze every phase of every operation.

B. Note every possible cause of scrap -- human and mechanical.

C. Make sure every possible cause is covered by checkup.

D. Make sure everyone concerned knows these causes.

V. HOW CAN WE PROFIT BY OUR MISTAKES?

A. Determine the causes.

B. Work out methods of preventing a repetition.

C. Follow up -- make sure method is carried out.

In summarizing, the leader pointed out that each of the three main divisions of a foreman's job is involved in the problem of reducing scrap and rework. As a manager, he just analyzes the causes of scrap in his department -- not only the causes of scrap already made, but the possible causes inherent in every job -- and plan systems of checks and controls that will cover everyone of them. As a supervisor, he just must do the checking as planned, and make sure that every man in his department is doing his job in the right way. And as an instructor, he must teach his men the how and why of their job, and be sure that each of them knows and is on the watch for the possible causes of scrap in his own job. Finally, as a leader he must set his men an example of careful workmanship, and build up the same attitude in them.

We have accomplished the purpose of this meeting by determining a method reducing scrap and rework at Hamilton. But if we merely content ourselves with talking about it, Hamilton still stands to lose three million dollars and a lot of men and machine hours. It is squarely up to us to cut that loss to the irreducible minimum, and we can do it if everyone of us will carry into his own department the methods we have worked out in this meeting and put them to work.

The next meeting was announced for a week from today.

MINUTES

Group L — FOREMANSHIP DISCUSSION — Meeting No. 12

May 9, 1944

The twelfth meeting was opened at 2:30 A.M. with the following attendance:

PRESENT		ABSENT
P. Balfour	F. Lennon	(none)
J. Emerck	A. Litvinchyk	
A. Cade	L. Matthews	
J. DeFazio	P. Piwarczyk	
W. Finley	D. Smith	
J. Ivers	W. Smith	
M. Kobylevicz	R. Southergill	
S. Kvartunas	P. Tierney	
F. Larson	R. Wuterick	
J. Lavoie		

Group Leader: J. R. McPherson
Group Secretary: L. Matthews

PUTTING THE RIGHT MAN ON THE RIGHT JOB

INTRODUCTION

The topic for the meeting today is "Putting the Right Man on the Right Job". During several of the discussions this group has held to date there was mentioned the need for putting the employee on the job for which he is best fitted and the job that fits him best. In those discussions this need was mentioned only in passing, but today we will spend the entire meeting discussing some of the problems connected with "Putting the Right Man on the Right Job", and the methods that a foreman should use to accomplish this goal.

Suppose we look at this topic from a different angle. As a supervisor you must face cold facts. You all know that your job is to produce the goods or somebody else will. The job is there - it must be done. Basically, as a supervisor, your job is to

(1) Produce a high quality.
(2) Produce a large quantity.
(3) Produce economically.
(4) Increase the quantity of output.

Without pulling any punches whatsoever, these are the demands of Management. They are not requests. There can be no alibis. Management wanted to put somebody on the job who could produce, and that is the reason each of you is there. You recognize the good managerial sense in making these demands. It is good sound business. Therefore, as a supervisor, why not issue the same orders to yourselves. Put the right man on the right job.

In order to put the right man on the right job it is necessary for the foreman to know two things: first, the requirements on the job, the second, the qualifications of the man. Once you have thoroughly analyzed the jobs in your department and the man in your

department, it is fairly simple to pick the best job for a particular man, or the best man for a particular job.

Someone has said that there are three basic classes of men in all departments: the "Fits", the "Misfits", and the "Unfits". The "Fits" are the men who produce the maximum amount of work, are interested in their jobs, satisfied with conditions, make practical suggestions, and cooperate with you.

The "Misfits" are the men who try hard but don't get anywhere. They do their best, but because they are not on the right job, their best efforts are not effective. These men should be shifted to more suitable jobs at the first opportunity. In most cases, it needs only a little personal help from the supervisor to turn a "Misfit" into a "Fit".

The real "Unfit" is a rare bird. Most of the cases you may think of offhand are not really unfit at all, but only badly misfit. Give such a man a job he can do and likes to do and you will have no further trouble with him. The real "Unfits" - the chronically lazy, the disturber, the viciously inclined, or the mentally irresponsible - are comparatively easy to discover, and the man who does not have these glaring difficulties should not be classed as "unfit".

The purpose of this discussion is to discover ways and means of "Putting the Right Man on the Right Job".

I. WHAT BENEFITS RESULT FROM PUTTING THE RIGHT MAN ON THE RIGHT JOB?

A. Increased production.)

B. Better quality.)

C. Less cost.)

D. Less scrap.) Makes foreman's job easier.

E. Higher morale.)

F. Fewer accidents.)

G. Better cooperation.)

H. Smoother operation.)

I. Less waste.)

II. HOW SHOULD THE FOREMAN GO ABOUT PUTTING THE RIGHT MAN ON THE RIGHT JOB?

A. Analyze the man. (Find out what he can do)

B. Analyze the job. (Find out what is required)

A side discussion developed the point that the foreman must analyze the job first, then the man. He can then "dovetail" the facts together so as to put the right man on the right job.

III. WHAT FACTORS MUST THE FOREMAN CONSIDER IN ANALYZING THE JOB?

A. Experience required.

B. Tolerance allowed.

C. Tools required.

D. Time allowed.

E. Output required.

F. Quality required.

G. Physical requirements.

H. Responsibilities.

I. Job rating.

J. Hazards.

K. Training required.

IV. WHAT FACTORS MUST THE FOREMAN CONSIDER IN ANALYZING THE MAN?

A. Experience.

B. Intelligence.

C. Attitude.

1. Toward the job.

2. Toward the foreman.

3. Toward fellow-employees.

D. Adaptability.

E. Physical ability.

F. Training.

G. Personality.

H. Temperament.

I. Age.

J. Dependability.

It was pointed out in conclusion that just as it is sound business sense on the part of management to put the right man on the right job when filling supervisory positions, so it is good sense for each foreman to carry out the same policy in his own department. If each foreman analyzes his jobs and his men, and "dovetails" the two together, it will help him greatly in achieving the main objectives of his job.

This meeting has been the first devoted to the general problem of proper placement of help. Next week, when this group meets here at the same time, we shall consider another phase of this problem; namely, "The Waivered Employee".

MINUTES

Group E — FOREMANSHIP DISCUSSION — Meeting No. 13

May 19, 1944

The thirteenth meeting was opened at 9:00 A.M. with the following attendance:

PRESENT		ABSENT	
D. Andreotta	D. Loftus	A. Bergeron	(Absent)
M. Civiello	W. McAdam	J. Calkins	(Absent)
R. Dion	E. McMahon	J. Desso	(Absent)
L. Filliere	A. Mannella	M. Dubiel	(Absent)
F. Fogarty	R. Mason	S. Hancock	(Absent)
M. Hallowell	E. Morrissette	V. Olson	(Absent)
D. Hemingway	N. Quimby	K. Pitkin	(Sick)
J. Humaj	P. Tautkus	W. Shearer	(Absent)
A. Lang	R. Ten Eyck	S. Tatem	(Absent)
		S. Vendoloski	(Sick)

Group Leader: P. R. Haugan
Group Secretary: A. Lang

THE WAIVERED EMPLOYEE

INTRODUCTION

You will recall last week we agreed we would devote the next few discussions to the problem of the proper placement of help. Last week we discussed putting the right man on the right job. We concluded that if each foreman examines his jobs and his employees and dovetails the two together it would help him greatly in achieving the main objectives of his job.

Today let's tackle the problem of the waivered employee - the employee who comes to work here with a definition physical limitation. Only a few years ago this would not constitute a major foremanship problem. The annual report of the Medical Department reveals that up to 1940 only 25% of the applicants examined were found to have defects that required the signing of waivers. Last year, 1943, 54% of all examinations showed such defects. Break-downs of employees hired for individual Hamilton departments showed that as high as 66% of new employees hired were hired on waivers. This steady increase in the number of waivered applicants is attributable of course to the fact that Selective Service has drained this area of most of its abled bodied workers. As the demands of the Selective Service increase, this tendency will continue and higher and higher percentages of those hired will be waivered for physical disability.

What is not so apparent is that the high percentage will continue after the war, probably for several years to come. Even now, some 39,000 persons are discharged from the Armed Forces each month wounded, shell shocked, or otherwise disabled. While a small percentage of these ex-service men will be hospitalized indefinitely, the greater part of them will have to be absorbed by private industry. As the war increases in intensity, the number of these applicants will also increase. Whether we like it or not, we have a moral responsibility to absorb as many such applicants as we can; and, this responsibility, more over, will be enforced by pressure of public opinion. We must, therefore, face the fact that for several years to come, at any rate, the waivered employee is apt

to become one of the most serious foremanship problems.

It is, therefore, important that each of us understand clearly what a waiver is and what we can do about it. Admittedly we in this room - Set-up Man, Supervisors, Assistant Foreman, cannot solve the problem by ourselves. Much must be done by top-management - such more by the department heads, but we have an important share in the problem. We are closer than anyone else to the jobs these people will have to do. Whatever they get from us. Too often in the past our comments on this problem have been governed by prejudice and narrow thinking. It is, therefore, important that we clear up any misconception we may have about waivers, handicapped employees and make an honest effort to work out a solution to the problem they present.

I. WHAT IS A WAIVER?

In a general discussion the following points were brought out:

A. A waiver is (definition) a sworn statement to the Workmen's Compensation Commissioner of Connecticut by an employee to the effect that he waives any and all rights to compensation on behalf of himself, and, in case of death resulting therefrom, for his dependability for any injury sustained by him while in the employ of United Aircraft Corporation of East Hartford, Connecticut, which may be attributable in a material degree to the physical defects described in the certificate above the employee's signature.

B. 1. A waiver benefits the company in that (a) it limits the company's liability, (b) it gives the company a larger labor force from which to draw, (c) it enables the company to place an employee where he may be best utilized.

2. A waiver benefits the employee in that (a) it emphasizes to the employee what his handicap is (b) it emphasizes to him the importance of doing only work within his limitations (c) it enables him to exercise his skill and trade by making him employable, and hence capable of earning a larger income than he otherwise could.

C. A foreman is obligated to place a waivered employee in a job that will suit his limitations. Moreover, in accordance, with instructions stamped on the put-on, the Medical Department must be consulted before the waivered employee is transferred to any other job.

D. Under certain circumstances an employee can be waivered in the course of his employment. Since this type of waiver would not appear on the put-on, the foreman must be careful to note it on the department records whenever it occurs.

II. WHAT PHYSICAL HANDICAPS CAN BE WAIVERED? HOW DOES EACH LIMIT THE WORKER?

	HANDICAP	LIMITATION	MEDICAL CODE
1.	Weak back	No heavy lifting	3F(R)
2.	Varicose veins	No prolonged standing	3F
3.	Poor vision	No close work	3V
4.	Hernia	No strenuous	3R
5.	Weak scar	No heavy work	3A
6.	Loss of member	No heavy work	3A

A general discussion emphasized:

A. A foreman can tell that an employee is waivered by noting medical code letters on his put-on.

B. A foreman can tell from the medical code on the put-on to what general type of work the employee is restricted.

C. A foreman may get more detailed information from the Medical Department. Not all waivers restrict or limit the employee on type of work.

D. There are two types of waivers:

1. Those type waivers signed for physical defects which limit the supervisor in placing the employee on any job in his section - such as heavy lifting and prolonged standing.

2. The type which places no limit as far as type of work. Can be placed on any job - and no medical restriction - such as a person with a superficial scar for which medical deemed a waiver to be signed but specified it as no detriment to job - hard of hearing would be another.

E. Some conditions are not waivered, but medical neverthless places a limitation on the type of work. In such cases, the medical code on the put-on will not contain the letters WR (waiver required) but will contain those indicating the man's limitation. Foreman should treat such individuals just as though they were waivered.

III. HOW CAN WE GET MAXIMUM VALUE OUT OF OUR WAIVERED EMPLOYEES WITHIN OUR DEPARTMENT?

A. Proper Placement

1. Find physical limitations

2. Analyze the man

3. Analyze the job

4. Consult with medical

B. Adjust jobs

1. Hoists, conveyors, etc.

2. Helpers

3. Platforms, chairs, benches

4. Extra instruction and supervision

5. Safety, maintenance

6. Tool and equipment engineering, machine repairs

SUMMARY

In our discussion of this increasingly important problem of The Waivered Employee we have seen everyone who has authority to have men do work must:

1. Know the physical limitations of every man working for him.

2. Check the Medical Department for more detailed recommendations.

3. Place the waivered employee on the right job and alter the job if necessary.

4. Give whatever special supervision that is necessary to put the employee in the mental and physical environment that will enable us to get the maximum value out of the waivered employee.

Next week, when we meet here at the same time, we shall discuss another Problem of Placement; namely, The Injured Employee.

EMPLOYMENT REPORT

A - Group 1 or 2
D - Deferred report (until glasses obtained, waiver filed, infection clears, etc.)

LA - Group 3 (Limited acceptance)
R - Group 4 (Rejected)

EMPLOYMENT MEANING	MEDICAL REASONS
Fit for any employment.	Perfect physically and excellent mentally
Average type for any job.	Average. Minor defects only.
Fit only for certain job when specifically approved for it by Medical Department.	Defective (reason described in letters a, b, c, etc.)
Fit for specific task for which examined (for no other task)	
No rough, heavy work.	Poor development, musculature, too young too old, skeletal deformity.
Color Blindness.	Color Blindness.
No nervous strain.	High strung, neurotic, hyperthyroid, etc
Dry work only.	Rheumatism, arthritis, chronic lung disease, T. B.
Keep away from moving machinery.	Epilepsy, tabes, paresis, ataxia.
No prolonged standing.	Varicose veins, spinal or extremities deformity.
Hard of hearing.	Both ears below 0.3 normal hearing.
Immature.	Under 16 years of age and immature.
No mental strain.	As for group 3C and also low mentality groups.
No heavy lifting.	Hernia, hydrocele, varicocele, weak back
Free from dust.	Chronic lung or sinus disease.
Poor vision.	Near vision below 0.7, distant vision below 0.6, one or both eyes, corrected.
Recommended for task.	After vision is corrected.
Waiver required.	Vision less than 0.2 one eye, deafness, hernia, varicocele, marked disability.
Avoid skin irritants.	Acne or other dermatitis present.
Rejected.	Insanity, contagious diseases, venereal disease, nerve diseases, or markedly abnormal physical findings, loss of vision in either eye.

MINUTES

Group H. FOREMANSHIP DISCUSSION Meeting No. 14

May 25, 1944

The fourteenth meeting was opened at 5:30 P.M. with the following attendance:

PRESENT		PRESENT FROM GROUP G	ABSENT	
G. Beauchamp	F. Ledger	H. Leighton	R. Bancroft	(absent)
R. Cone	B. McManus	J. Pangonis	G. Bonnet	(absent)
J. Fraher	D. O'Connor	C. Rollins	R. Burch	(absent)
G. Guy	P. Packard		D. DeGray	(absent)
A. Heimgartner	E. Sawicki		J. Hillce	(absent)
M. Karpuska	M. Scaglia		E. Sullivan	(absent)
N. Kloter	W. Tofill			
P. Laduk				

Group Leader: R. W. Driggs
Group Secretary: M. Scaglia

PLACING THE INJURED EMPLOYEE

INTRODUCTION

Last week, as one phase of the problem of proper placement of help, we discussed the Waivered Employee and we concluded that we must know each man's limitations and consider it carefully when having him do any job if we are to get maximum value from his efforts.

While we were discussing the placement of the man who has a physical disability prior to employment - The Waivered Employee - much interest was shown concerning the person who incurs a physical disability during employment. Therefore, today let us examine this problem of The Injured Employee.

From our point of view there are two types of injury:

I. Injuries involving permanent disability. These we can handle in exactly the same way as the waivered employee about whom we talked last week, and, therefore, we need not discuss them further today.

II. Injuries involving a temporary disability. These are the cases about which we are directly concerned today. For discussion purposes let us limit our consideration to the injury involving a limitation of about thirty days.

Injuries that cause a temporary disability may be occupational, i.e., the result of an accident sustained in the shop, or non-occupational, i.e., the result of illness, or operation sustained outside the shop. Perhaps it would be well to determine first of all how this group feels about differentiating between occupational and non-occupational injuries.

DISCUSSION

I. SHOULD WE TREAT OCCUPATIONAL AND NON-OCCUPATIONAL CASES DIFFERENTLY?

A general discussion disclosed that the group felt the foreman should make no distinction between occupational and non-occupational injuries in placing an injured man on light work.

II. WHAT ARE THE MOST COMMON TYPES OF OCCUPATIONAL INJURY? OF NON-OCCUPATIONAL INJURY?

INJURY	LIMITATION
Laceration	Dry work
Sprains	Light work
Fractures	Light work
Dermatitis	Dry clean work
Eyes	No close work
Appendix	Light work
Asthma	No dust

III. SHOULD WE REQUIRE THE INJURED MAN TO STAY OUT UNTIL HE CAN DO HIS REGULAR JOB?

In a general discussion the group indicated some very definite advantages of having a man stay out. Among them were:

A. Eliminates problem of placement.
B. No worry about cry of favoritism.
C. Reduces indirect labor costs.
D. Tends to discourage faking of strains, etc., for the purpose of engineering transfers.

On the other hand, equally definite advantages of having an injured man do a light job were listed, among them were:

A. Keeps insurance rates down.
B. Keeps workers morale up because of higher income and feeling he is being cared for.
C. Adds efforts, even though light, of a man that would otherwise be lost.
D. Prevents faking for the purpose of getting "leave of absence".

There was substantial agreement to the effect that this group was definitely in favor of the latter policy.

IV. SHOULD WE REQUIRE THE INJURED MAN'S DEPARTMENT TO GIVE HIM TEMPORARY, LIGHT WORK?

Even though such a policy would be more difficult to apply in some departments than in others, there was general agreement that each department should be required to give temporary, light work to its own injured employees. It was felt that many fraudulent claims of injury could be eliminated in this way. More important, such a policy would foster morale by having a worker think his supervisors were sincerely interested in him as evidenced by their efforts to take care of him rather than "pass the buck" and have someone else keep him busy as a "favor" to the man's foreman.

SUMMARY

In summation, the conclusions that this group reached concerning the Placement of the Injured Employee were pointed out to be:

(1) No distinction between the occupational and non-occupational injury should be made so far as the foreman is concerned.

(2) This group would favor putting all injured employees on light jobs instead of keeping them out until fit to do their regular job.

(3) Substantial agreement was reached on the point that the injured man's department should be required to give him temporary, light work.

Next week, when this group meets at the same time, in the same place we shall discuss problems concerned with women employees.

MINUTES

Group J — FOREMANSHIP DISCUSSION — Meeting No. 1.

May 18, 1944

The thirteenth meeting was opened at 6:30 P.M. with the following attendance:

PRESENT		ABSENT	
C. Chapin	T. Newberry	E. Bamford	(absent)
A. Charest	E. Parker	S. Goldberg	(absent)
A. Churilla	J. Racicot	T. Gutowski	(absent)
W. Cribbs	E. Renault	H. Knox	(absent)
F. Hobbs	R. Soderquist	F. Landers	(absent)
G. Johnson	C. Swenos	B. McNeil	(absent)
W. Kowalewski		W. Mainville	(absent)
		S. Masnicki	(absent)
		L. Mochau	(absent)
		H. Roberts	(absent)
		W. Shearer	(absent)
		J. Slavinsky	(absent)

Group Leader: R. W. Driggs
Group Secretary: C. Chapin

THE WAIVERED EMPLOYEE

INTRODUCTION

You will recall last week we agreed we would devote the next few discussions to the problem of the proper placement of help. Last week we discussed putting the right man on the right job. We concluded that if each foreman examines his jobs and his employees and dovetails the two together it would help him greatly in achieving the main objectives of his job.

Today let's tackle the problem of the waivered employee - the employee who comes to work here with a definition physical limitation. Only a few years ago this would not constitute a major foremanship problem. The annual report of the Medical Department reveals that up to 1940 only 25% of the applicants examined were found to have defects that required the signing of waivers. Last year, 1943, 54% of all examinations showed such defects. Break-downs of employees hired for individual Hamilton departments showed that as high as 66% of new employees hired were hired on waivers. This steady increase in the number of waivered applicants is attributable of course to the fact that Selective Service has drained this area of most of its abled bodied workers. As the demands of the Selective Service increase, this tendency will continue and higher and higher percentages of those hired will be waivered for physical disability.

What is not so apparent is that the high percentage will continue after the war, probably for several years to come. Even now, some 39,000 persons are discharged from the Armed Forces each month wounded, shell shocked, or otherwise disabled. While a small percentage of these ex-service men will be hospitalized indefinitely, the greater part of them will have to be absorbed by private industry. As the war increases in intensity, the number of these applicants will also increase. Whether we like it or not, we have a moral responsibility to absorb as many such applicants as we can; and, this responsibility, more over, will be enforced by pressure of public opinion. We must, therefore, face the fact that for several years to come, at any rate, the waivered employee is apt to become one of the most serious foremanship problems.

It is therefore, important that each of us understand clearly what a waiver is and what we can do about it. Admittedly we in this room - Set-Up Man, Supervisor, Assistant Foreman, cannot solve the problem by ourselves. Much must be done by top-management, - such more by the department heads, but we have an important share in the problem. We are closer than anyone else to the jobs these people will have to do. Whatever they get from us. Too often in the past our comments on this problem have been governed by prejudice and narrow thinking. It is, therefore, important that we clear up any misconception we may have about waivers, handicapped employees and make an honest effort to work out a solution to the problem they present.

I. WHAT IS A WAIVER?

In a general discussion the following points were brought out:

A. A waiver is (definition) a sworn statement to the Workmen's Compensation Commissioner of Connecticut by an employee to the effect that he waives any and all rights to compensation on behalf of himself, and, in case of death resulting therefrom, for his dependability for any injury sustained by him while in the employ of United Aircraft Corporation of East Hartford, Connecticut, which may be attributable in a material degree to the physical defects described in the certificate above the employee's signature.

B. 1. A waiver benefits the company in that (a) it limits the company's liability, (b) it gives the company a larger labor force from which to draw, (c) it enables the company to place an employee where he may be best utilized

2. A waiver benefits the employee in that (a) it emphasizes to the employee what his handicap is (b) it emphasized to him the importance of doing only work within his limitations (c) it enables him to exercise his skill and trade by making him employable, and hence capable of earning a larger income than he otherwise could.

C. A foreman is obligated to place a waivered employee in a job that will suit his limitations. Moreover, in accordance, with instructions stamped on the put-on, the Medical Department must be consulted before the waivered employee is transferred to any other job.

D. Under certain circumstances an employee can be waivered in the course of his employment. Since this type of waiver would not appear on the put-on, the foreman must be careful to note it on the department records whenever it occurs.

II. WHAT PHYSICAL HANDICAPS CAN BE WAIVERED? HOW DOES EACH LIMIT THE WORKER?

	HANDICAP	LIMITATION	MEDICAL CODE
1.	Hernia	No heavy work	3R
2.	Varicose veins	No prolonged standing	3F
3.	Poor vision	No close work	3V
4.	Dermatitis	Dry clean work	3SK
5.	High blood pressure	No high exertion(mental or physical)	
6.	Skeletal deformity	Care study	3A
7.	Weak scars	Care study	3A

A general discussion emphasized:

A. A foreman can tell that an employee is waivered by noting medical code letters on his put-on.

B. A foreman can tell from the medical code on the put-on to what general type of work the employee is restricted.

C. A foreman may get more detailed information from the Medical Department. Not all waivers restrict or limit the employee on type of work.

D. There are two types of waivers:

1. Those type waivers signed for physical defects which limit the supervisor in placing the employee on any job in his section - such as heavy lifting and prolonged standing.

2. The type which places no limit as far as type of work. Can be placed on any job - an no medical restriction - such as a person with a superficial scar for which medical deemed a waiver to be signed but specified it as no detriment to job - hard of hearing would be easier.

E. Some conditions are not waivered, but medical nevertheless places a limitation on the type of work. In such cases, the medical code on the put-on will not contain the letters WR (waiver required) but will contain those indicating the man's limitation. Foreman should treat such individuals just as though they were waivered.

III. HOW CAN WE GET MAXIMUM VALUE OUT OF OUR WAIVERED EMPLOYEES WITHIN OUR DEPARTMENT?

A. Job adjustment

1. Provide hoist

2. Provide chair

3. Supply creams for dermatitis

4. Better light

5. Relocation of job

B. Placement

1. Check medical

2. Analyze job

3. Analyze man

SUMMARY

In our discussion of this increasingly important problem of The Waivered Employee we have seen everyone who has authority to have men do work must:

1. Know the physical limitations of every man working for him.

2. Check the Medical Department for more detailed recommendations.

3. Place the waivered employee on the right job and alter the job if necessary.

4. Give whatever special supervision that is necessary to put the employee in the mental and physical environment that will enable us to get the maximum value out of the waivered employee.

Next week, when we meet here at the same time, we shall discuss another Problem of Placement: namely, The Injured Employee.

EMPLOYMENT REPORT

A - Group 1 or 2
D - Deferred report (until glasses obtained, waiver filed, infection clears, etc.)

LA - Group 3 (Limited acceptance)
R - Group 4 (Rejected)

EMPLOYMENT MEANING	MEDICAL REASONS
Fit for any employment.	Perfect physically and excellent mentally.
Average type for any job.	Average. Minor defects only.
Fit only for certain job when specifically approved for it by Medical Department.	Defective (reason described in letters: a, b, c, etc.)
Fit for specific task for which examined (for no other task)	
No rough, heavy work.	Poor development, musculature, too young, too old, skeletal deformity.
Color Blindness.	Color Blindness.
No nervous strain.	High strung, neurotic, hyperthyroid, etc.
Dry work only.	Rheumatism, arthritis, chronic lung disease, T. B.
Keep away from moving machinery.	Epilepsy, tabes, paresis, ataxia.
No prolonged standing.	Varicose veins, spinal or extremities deformity.
Hard of hearing.	Both ears below 0.3 normal hearing.
Immature.	Under 16 years of age and immature.
No mental strain.	As for group 3C and also low mentality groups.
No heavy lifting.	Hernia, hydrocele, varicocele, weak backs.
Free from dust.	Chronic lung or sinus disease.
Poor vision.	Near vision below 0.7, distant vision below 0.6, one or both eyes, corrected.
Recommended for task.	After vision is corrected.
Waiver required.	Vision less than 0.2 one eye, deafness, hernia, varicocele, marked disability.
Avoid skin irritants.	Acne or other dermatitis present.
Rejected.	Insanity, contagious diseases, venereal disease, nerve diseases, or markedly abnormal physical findings, loss of vision in either eye.

MINUTES

Group L — FOREMANSHIP DISCUSSION — Meeting No. 16

June 6, 1944

The sixteenth meeting was opened at 2:30 A.M. with the following attendance:

PRESENT		ABSENT	
J. Bmerck	L. Matthews	P. Balfour	(Day off)
A. Cado	P. Piwarczyk	J. DeFazio	(Absent)
W. Finley	D. Smith	F. Larson	(Day off)
J. Ivers	W. Smith	F Lennon	(Day off)
M. Kobylevicz	R. Southergill		
S. Kvartunas	P. Tierney		
J. Lavoie	R. Wuterick		
A. Litvinchyk			

Group Leader: J. R. McPherson
Group Secretary: L. Matthews

OVERTIME PAYMENTS TO HOURLY RATED EMPLOYEES

INTRODUCTION

So far in this series of discussions we have been concerned with methods and policies. In today's discussion we will begin consideration of those Standard Procedures which directly affect the foreman in his dealings with his employees.

There is a marked difference between a policy and a procedure. A policy is a principle by which we agree to act. It may be quite simple in expression. A procedure is the mode or method of carrying out the policy and since it must allow for every possible case, is apt to become quite complicated. A common illustration of this point is to be found in the law. The policy or principle upon which the law is based is that of simple justive, but the procedure, the rules of evidence and appeal that have been built up to enable the courts to carry out this policy are so complex that it requires at least four years of legal training and several years of courtroom experience before a man can master them. Industrial procedures of course, are not so complicated as legal procedure, but they do afford many opportunities for the unwary foreman to go astray.

The first Standard Procedure we are going to consider is that which governs the payment of overtime to hourly rated employees. All of us at one time or another have had our employees come up to us indignantly shouting, "I've been gypped". When that happened to you were you able to compute what the man's earnings should be from a study of his time card? Or did you have to send him to Personnel or Payroll to get his difficulty straightened out?

Perhaps you are thinking, "Why should I be a wage expert?" There are several reasons. Apart from the general responsibility of everyone in a supervisory capacity to transmit company policies to our employees clearly and correctly we must remember:

1. To the average employee the size and correctness of his pay check is the most important single fact in his working life.

2. More grievances, real and imaginary, have arisen from misunderstanding about the basis and compilation of weekly earnings than from any other cause.

3. If we, his supervisors, cannot answer his questions about wages the employee must either (a) go on in ignorance of the facts or (b) seek information elsewhere. In the latter case the information may be wrong and may be biased.

The purpose of this meeting, therefore, is to study briefly the Standard Procedure governing overtime payments to hourly rated employees.

(The group leader at this point districuted copies of Standard Procedure 7.2.9 to the group. He then read through the procedure and the group discussed it point by point. Following this discussion the following specific problems were given out in a form of a test and the correct answers subsequently given.)

DISCUSSION

See the attached sheets for the cases discussed at this meeting.

SUMMARY

Thus we see that although the problems which arise under this procedure are tricky, they are not difficult for anyone who has a working knowledge of the procedure itself. It is, therefore, advisable that each of us keep our copy of this procedure on hand, and be sufficiently familiar with it, to be able to refer to it when necessary to straighten out employee problems.

CASES DISCUSSED AT MEETING NO. 16

Case 1. Employee clocked in at 7:30 A.M. Lunch 11:00 - 11:30. Out at 3:35 P.M.

Question: Is employee given credit for Day Worked?

Answer: No.

Question: Does employee get 1½ pay on 6th Day Worked?

Answer: Yes, except for 3/10 of one hour.

Case 2. At request of foreman, employee rang in at 9:00 A.M. Lunch 12:00 - 12:30. Out at 5:00 P.M.

Question: How much overtime? Is it a Day Worked?

Answer: One hour. Credit for Day Worked.

Case 3. Employee rang in at 8:00 A.M. Lunch 11:00 - 12:00. Out at 4:00 P.M.

Question: Is credit given for a Day Worked?

Answer: Yes.

Case 4. Employee punched clock at 8:15 A.M. Lunch 11:00 - 12:00. Out at 4:00 P.M.

Question: Is credit given for a Day Worked?

Answer: No.

Question: If employee had punched clock at 8:10 A.M.?

Answer: No.

Case 5. Employee punched clock in at 8:30 A.M. Lunch 11:00 - 11:30 A.M. Out at 4:00 P.M.

Question: Day Worked?

Answer: Yes.

Case 6. Employee in at 7:30 A.M. At 8:30 A.M. employee was sent home because there was no work for him.

Question: How many hours credit given? Is day work considered?

Answer: 4 hours and day work.

Case 7. Employee is in at 4:00 P.M. and at 5:00 P.M. Medical sent him home because of illness. (Occupational)

Question: How many hours? Day Worked? Bonus 7½¢?

Answer: Yes. Paid for 8 hours. Credit for Day Worked. Shift bonus.

Case 8. If non-occupational injury, and same circumstances as Case 7.

Question: Same benefits as Case 7?

Answer: No. Paid for 1 hour worked. Credit for Day Worked. Shift bonus.

Case 9. Employee has been to New Haven for Selective Service physical exam. Reports to work at 8:00 P.M. Lunches as usual and out at 12:30 A.M.

Question: Shift bonus? Day Worked? How many hours?

Answer: Shift bonus. No Day Worked. 4 hours worked.

Case 10. Employees baby sick so has stayed at hospital until 5:00 P.M. In at 5:30. Lunches as usual. Called to hospital at 10:00 P.M.

Question: Credit for Day Worked?

Answer: No.

Question: If he came in on time any difference.

Answer: Yes, credit for Day Worked.

Case 11. In on time. Out in 1 hour for Union Meeting.

Question: So what?

Answer: Paid for one hour worked. Credit given for Day Worked.

Case 12. Employee in at 12:50 A.M. Lunches 3:30 - 4:00 A.M. Out at 7:30 A.M.

Question: Credit for Day Worked? Paid for 8 hours? 7½¢?

Answer: Credit for Day Worked? Paid for 6 1/10 hours. 7½¢.

Case 13. Employee in at 1:31 A.M. Lunch at 3:30 - 4:00 A.M. Out at 7:30 A.M.

Question: Credit for Day Worked? 8 hours pay? 7½¢?

Answer: Credit was not given for Day Worked. 7½¢. Straight time.

Case 14. In at 12:40 A.M. Lunch regular. Out at 7:30 A.M.

Question: 8½ hours? 7½¢? Credit for Day Worked?

Answer: 8½ hours. 7½¢. Credit for Day Worked.

MINUTES

Group L — FOREMANSHIP DISCUSSION — Meeting No. 17

June 13, 1944

The seventeenth meeting was opened at 2:30 A.M. with the following attendance:

PRESENT		ABSENT	
P. Balfour	F. Lennon	J. Emerok	(absent)
A. Cado	A. Litvinchyk	D. Smith	(absent)
J. DeFazio	L. Matthews		
W. Finley	P. Piwarczyk		
J. Ivers	W. Smith		
M. Kobylevicz	R. Southergill		
S. Kvartunas	P. Tierney		
F. Larson	R. Wuterick		
J. Lavoie			

Group Leader: J. R. McPherson
Group Secretary: L. Matthews

INTRODUCTION

Last week we agreed to examine and discuss General Standard Procedure. We studied Procedure 7.2.9 concerned with "Overtime Payment to Hourly Rated Employees." In our discussion of real cases that frequently confuse many, we noted how to find the answers to every case we could conceive. We found many cases presented problems that, even though tricky, were not difficult to solve.

We had intended to discuss today "Transfer Procedure" or "Termination Procedure". While it is recognized there is a need for such discussion, another topic has been suggested for discussion today and next week, our final session in this series. Due to the urgency of the problem of Safety, Management has asked us to spend our last two meetings discussing the problem of Safety.

We all remember how our lost time accident record declined sharply January of this year. Our record was so outstanding that in March we were awarded a plague for working more than a million man hours without a single lost time accident. However, since the time of the award our frequency curve has shot up so sharply that today Safety is one of our most urgent topics for foremanship consideration.

This week we in this group shall witness two films "Cause and Cure" and "Production Through Safety". Next week, the Safety Supervisor, Mr. Johnson, and Liberty Mutual's Safety Engineer, Mr. Green will be here in person to lead our discussion. Since we shall have two experts here, let us think of the most difficult problems facing us in the plant today and prepare to put them "on the spot" while working out our common problems.

Mr. Green has asked me to pass out a quiz after the showing of "Cause and Cure", have you enter a cross under "True or False", and inform you to save them until our next session at which time he will give you the correct answers to the quiz and will discuss the question. Mr. Green and Mr. Johnson will be eager to discuss the films we shall see now. If any point in the film raises a question in your mind, please jot down the slide number and bring up the question for discussion next week.

The film "Cause and Cure" was then shown to the Group. A "True or False" was the accomplished by all present.

The film "Production Through Safety" was also shown.

A brief discussion of the films followed.

A continuation of the discussion will be the subject matter at our next meeting when we shall have present two guest experts on Safety.

MINUTES

Group L — FOREMANSHIP DISCUSSION — Meeting No. 18

June 20, 1944

The eighteenth meeting was opened at 2:30 A.M. with the following attendance:

PRESENT

P. Balfour	J. Ivers	F. Lennon	J. Smith
J. Emerok	M. Kobylevicz	A. Litvinchyk	W. Smith
A. Cade	S. Kvartunas	L. Matthews	R. Southergill
J. DeFazio	F. Larson	P. Piwarczyk	P. Tierney
W. Finley	J. Lavois	D. Smith	R. Wuterich

Group Leader: H. Green and L. Johnson
Group Secretary: L. Matthews

SAFETY

Last week we witnessed a film called "Cause and Cure". The film dealt with the investigation of industrial accidents to discover the causes and the things that can be done to eliminate the causes in order to prevent future accidents.

At this meeting, a continuation of our discussion on Safety, Mr. L. B. Johnson, Safety Supervisor introduced Mr. H. R. Green, a Liberty Mutual Insurance Company Safety Engineer.

Mr. Green pointed out during his opening remarks that the primary purpose of our safety discussions is to secure the cooperation of the supervisory staff in H.S.P.'s safety program. Mr. Green suggested that each supervisor be continually on the alert for unsafe practices and other hazards that might cause injuries to his employees, and that such conditions be eliminated by taking care of them himself, or reporting them to Mr. L. Johnson or a member of the Safety Committee.

Note: Any reports made to Safety Committee members will be turned over to Mr. L. B. Johnson by them. The members of the Safety Committee are listed below:

1. F. B. Bradley	6. H. Heim	11. T. Plumridge
2. G. Churilla	7. Lt. Jacobs	12. E. Shea or Dr. Gibson
3. J. Dwyer	8. L. B. Johnson	13. G. Simmons
4. O. K. Grant	9. L. C. Olmsted	14. H. Streitel
5. H. R. Green	10. D. Ostien	15. W. E. Zocherwiz

Mr. Green stated that since supervisors are the Key Men in any Safety Organization, the full cooperation of those present is vital to the success of H.S.P.'s program for safety.

A lively discussion followed in which considerable agreement was finally reached as to the "True and False" answers to the quiz based on the film "Cause and Cure". Mr. Green explained various problems in detail during the discussion.

We may summarize the most important points of the discussion in this manner:

The whole theory back of the business of investigating accidents is to prevent the same mistake from happening twice. In the words of the narrator in the film, "Study the accidents that have occurred, decide what caused them and then take steps to see that they do not repeat. Almost every accident results from a combination of unsafe acts

and unsafe conditions. An accident investigation is never finished until every unsafe act and every unsafe condition has been discovered. Let's make that our job in the investigation of accidents that occur here!"

At the end of this discussion, Mr. Green explained the purpose of the Lost Time Accident Frequency Boards which are prominently displayed in each plant and how Lost Time Accident Frequency Curves are computed in the H.S.P. Division. A paper, prepared by Mr. Green, explaining the computations in a simple and understandable manner was distributed. It is hoped that each supervisor will include the paper as a permanent part of his manual.

At the close of the talk by Mr. Green, Mr. Johnson, Safety Supervisor, thanked the supervisors for their past cooperation in safety matters and pointed out that their continued interest and cooperation should result in an improved accident record.

BIBLIOGRAPHY

I. Books.

Baker, F.E., "Relations with Public Education", Workers' Education in the U.S., Harper and Brothers, New York, 1941.

Brooks, D.V.N. and Miller, J.H., "The Role of Education in War and After", Harper and Brothers, New York, 1941.

Coit, E.G., "Government Support of Workers' Education", American Labor Education Service, New York, 1940.

Kerchen, J.L., "Workers Education on the Pacific Coast", Workers' Education, New York, June 1934.

Melby, E.O., "Mobilizing Educational Resources", Harper and Brothers, New York, 1943.

Schwarztrauber, E.E., "The School for Workers", University of Wisconsin, Madison, Wisconsin, February 1938.

Tiffin, Joseph, "Industrial Psychology", Prentice-Hall, Inc., New York, 1944.

II. Articles
A. Magazines, Pamphlets, etc.

The Advisory Committee on Education, "Report of the Committee", U.S. Government Printing Office, Washington, D.C., 1943.

A Bill, S.2061 (Report No. 1036) "to provide a national program for war mobilization and post-war adjustment", 2nd Session, 78th Congress, Washington, D.C., August 5, 1944.

Bixler, Roy W., "How Well is the ESMWT Program Serving War Production Needs?" Journal of Engineering Education, Vol. 34, No. 8, April 1944.

Case, G.W., "ESMWT Colleges Meet Industry's Professional Training Needs", Manpower Review, Washington, D.C., April 1944

Coit, E.G., "Government Support of Education", American Labor Education Service, New York, 1940.

BIBLIOGRAPHY

I. Books.

Baker, F.E., "Relations with Public Education", Workers' Education in the U.S., Harper and Brothers, New York, 1941.

Brooks, D.V.N. and Miller, J.H., "The Role of Education in War and After", Harper and Brothers, New York, 1941.

Colt, E.G., "Government Support of Workers' Education", American Labor Education Service, New York, 1940.

Keroben, J.L., "Workers Education on the Pacific Coast", Workers' Education, New York, June 1934.

Melby, E.O., "Mobilizing Educational Resources", Harper and Brothers, New York, 1943.

Schwartzbuber, E.E., "The School for Workers", University of Wisconsin, Madison, Wisconsin, February 1938.

Tiffin, Joseph, "Industrial Psychology", Prentice-Hall, Inc., New York, 1944.

II. Articles

A. Magazines, Pamphlets, etc.

The Advisory Committee on Education, "Report of the Committee", U.S. Government Printing Office, Washington, D.C., 1943.

A Bill, S.8081 (Report No. 1038) "to provide a national program for war mobilization and post-war adjustment", 2nd Session, 78th Congress, Washington, D.C., August 8, 1944.

Dixler, Ray W., "How Well is the ESMWT Program Serving War Production Needs?" Journal of Engineering Education, Vol. 34, No. 8, April 1944.

Case, G.W., "ESMWT Colleges Meet Industry's Professional Training Needs", Manpower Review, Washington, D.C., April 1944

Colt, E.G., "Government Support of Education", American Labor Education Service, New York, 1940.

Committee for Economic Development, Handbook No. 1, "Planning the Future of Your Business", Association of Consulting Management Engineers, New York, January, 1945.

Committee for Economic Development, "Post-War Employment and the Removal of Wartime Controls", A Statement of National Policy by the Research Committee, New York, 1945.

Committee for Economic Development, "Selecting and Training Post-War Sales Personnel", No. S.1, 2, 3, 4, 5, New York, 1945.

Conant, B., "State Variations in War Migration and Post-War Demobilization", Monthly Labor Review, Washington, D.C., September, 1944.

Congressional Record, "Proceedings and Debates of the 78th Congress", 2nd Session, Vol. 90, Washington, D.C., No. 123, August 8, 1944, No. 124, August 9, 1944, No. 125, August 10, 1944, No. 139, August 30, 1944, No. 140, August 31, 1944, No. 153, September 20, 1944.

Federal Works Agency, "Report on Progress of the W.P.A. Program", Washington, D.C., June 30, 1942.

Fine, Benjamin, "Education in Review", New York Times, New York, June 3, 1945.

Fine, Verna R., "Employment Changes in Massachusetts in Relation to Post-War Situation", Monthly Labor Review, Washington, D.C., October, 1944.

Harvey, O.L., "Evaluating Apprentices", Personnel, American Management Association, New York, January, 1944.

Hawkins, L.S., "VTWPW Program on Integral Part of Manpower Utilization", Manpower Review, Washington, D.C., 1944.

"Interim Report to the Connecticut Post-War Planning Board", by the Committee on Education, Hartford, Conn., July 1, 1944.

International Ladies Garment Workers' Union, "Annual Report", New York, May 31, 1944.

International Ladies Garment Workers' Union, "Growing-up 1917-1938", Norfolk, 1938.

Johnson, E.F., "Which Way Education?", Information Service, Federal Council of the Churches of Christ in America, New York, New York, January 20, 1945.

Klinefelter, C.F., "VAS Provides Visual Aids for War Training", Manpower Review, April, 1944.

Massachusetts Committee for Post-War Readjustment, "Business Planning Now for V Day", Boston, Massachusetts, March 19, 1943.

Meyers, C.A., "Personnel Problems of the Post-War Transition Period", C.E.D., New York, 1945.

National Education Association, "A Program for the Education of Returning Veterans", Washington, D.C., 1945.

National Resources Development Report for 1943, Part I, "Post-War Plan and Program", National Resources Planning Board, Washington, D.C., 1943.

Patterson, W.F., "ATS Looks at Present and the Future", Manpower Review, April, 1944.

Patterson, W.F., "Wartime Program of ATS", Personnel, November, 1943.

Report of Education Directors' Conference (CIO), Washington, D.C., March 1945.

"Report of the Executive Council of the A.F. of L. to the 64th Annaal Convention", New Orleans, La., November 20, 1944.

Report (to accompany S. 2061) Washington, D.C., August 5, 1944.

Starr, Mark, "Cap and Gown Meets Overalls", Guidance, Practical Arts and Vocational Education, January, 1945.

"Time", Vol. XLV, No. 27, Chicago, Illinois, July 2, 1945.

U.S. Department of Labor, Bureau of Labor Statistics, "Improvement of Labor Utilization Procedures", Bulletin No. 807, Washington, D.C., February, 1945.

War Manpower Commission, "Apprentice Training for Veterans", Bureau of Training, Washington, D.C., 1944.

War Manpower Commission Bureau of Training, "Growth of Organized Training Since 1940", Government Printing Office, Washington, D.C., April, 1944.

War Manpower Commission "Training Services", Bureau of Training, Washington, D.C., November, 1943.

War Shipping Administration, Training Organization, "Information Booklet - U.S.M.S.", Washington, D.C., 1944.

War Shipping Administration Training Organization, "Upgrading Schools - U.S.M.S.", Washington, D.C., April, 1944.

B. Newspapers

"Boston Traveler", Boston, Mass., November 13, 1944.

Browning, Arthur, "Will there be a job for Mrs. Jones?", The Christian Science Monitor, Boston, Mass., June 2, 1945.

Lewis, Kathryn, "A Letter from the Secretary-Treasurer", U.M.W. - District 50 NEWS, Vol. 4, No. 19, Washington, D.C., July 1, 1945.

"The Christian Science Monitor", Boston, Mass., May 29, 1945.

"The Washington Post", Washington, D.C., August 29, 1944.

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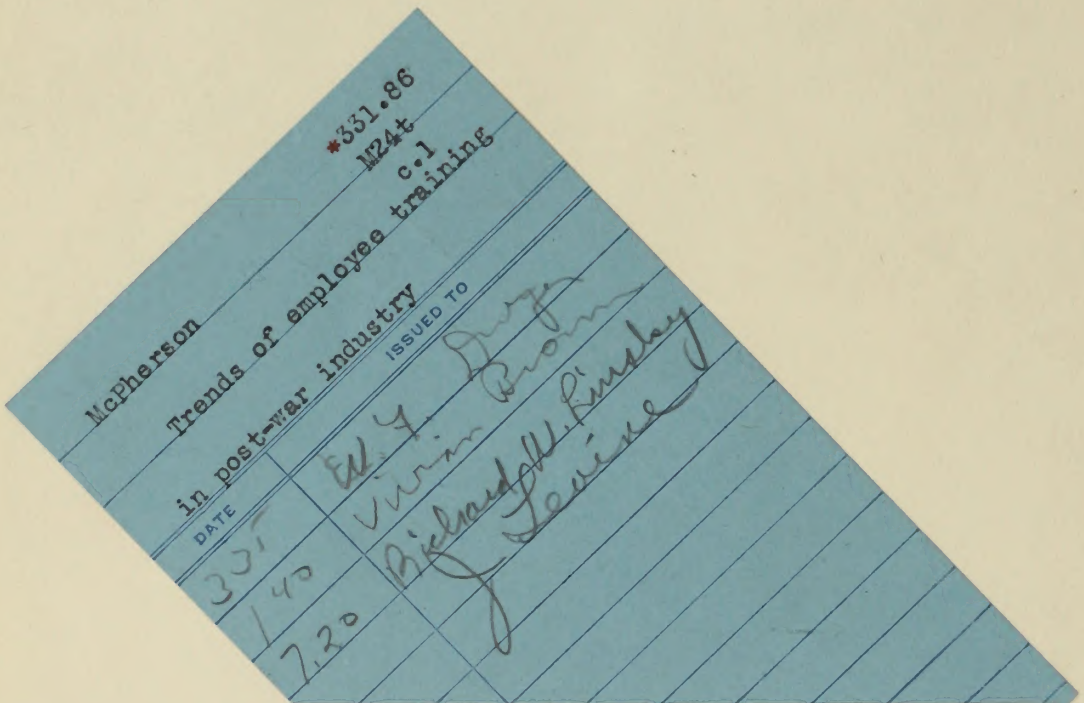

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